



LEXINGTON CENTER PARKING MANAGEMENT AND IMPLEMENTATION PLAN

FINAL

September 2014



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INTRODUCTION

A smart, integrated Parking Management Plan minimizes the financial cost for a municipality, creates a positive operational and effective transportation environment, encourages economic development, and helps a community to become more environmentally sustainable. A smart Parking Management Plan considers all users, unintended consequences, and maximizes available resources before investing in new ones. Lexington Center's Parking Management Plan sets the stage for a vibrant future while honoring its historic past.

The Center Parking Management and Implementation Plan was initiated, developed, and meticulously refined by multiple parties in the Center. Led by Economic Development Town staff and the consultant, the Center Committee's Parking Management Group (PMG), several key Town stakeholders, and many community members actively participated in the development of this plan.

This plan pulls together years of effort and input on a comprehensive approach to managing parking in Lexington Center. The 2001 Parking Study (VHB) laid the groundwork for addressing immediate needs, especially with regards to the Library relocation. In 2010, the Town built upon the 2001 study through a Massachusetts' Department of Housing and Community Development's Downtown Initiative grant to develop a Parking Technical Assistance Study (Nelson\Nygaard). The 2013-2014 effort brings together this past work, plus current and expected future needs, including the Town Center Streetscape and Battle Green Plans, to establish a complete policy framework to manage Lexington Center parking to achieve overall Town and Center goals.

Lexington Center boasts historic charm, vibrant retail boutiques and restaurants, a well-traveled multi-use path, and a walkable, mixed-use environment, which combined create a lively atmosphere at all times of day on every day of the week. The Center's variety of destinations attracts local, regional, national, and international tourists, most of these visitors arriving by car. Parking availability is one of the keys to supporting the Center's businesses, tourism economy, and community, together creating varied demand throughout the study area by time of day, week, and season. Integrating the parking plan with the Town's Streetscape and Battle Green Plans is also a critical connection to making both plans successful. This 2013-2014 Parking Management and Implementation Plan provides the framework to preserve Lexington Center's past while working towards a healthy future.

EXISTING CONDITIONS

The existing conditions section establishes a broad, yet detailed, benchmark of current parking supply within a quarter mile of the heart of Lexington Center. Town staff and the team defined this study area to include all critical parking assets and encompass any perceived parking issues. This documentation of existing conditions directly informs the study recommendations and provides a benchmark for community discussion and policy decisions on parking, the transportation system, and land use.

This chapter provides data and analysis to understand the existing parking conditions in the Lexington Center. The data summarized in this chapter were collected during October and early November in 2013 by Nelson\Nygaard. Data collected was also corroborated with (and is consistent with) other Town parking counts collected by the consultants working on the Center Streetscape Plan.

This chapter includes maps, tables, and summaries of the existing conditions pertinent to the team's key findings, organized under the following headings:

- **Parking Inventory** – A review of all parking spaces by location and regulation
- **Parking Utilization** – Observed use of existing parking through the course of a typical weekday and weekend. Includes utilization profiles of "core" areas, general and restricted access lots, and publicly and privately owned lots.
- **Public Outreach and Process** – A summary of the public outreach efforts, including the online survey results, stakeholder interviews, and public meetings.
- **Town Management/Administration** – A review of how the Town administers and manages the parking system today.
- **Zoning Analysis** – A review of the current Zoning Bylaws

STUDY AREA

The Lexington Center study area encompasses about a quarter-mile walk from the corner of Waltham Street and Massachusetts Avenue. This study area was intentionally chosen to extend beyond the heart of the Center to measure the extent of the Center's parking spillover. The study area (shown in Figure 1) is centered along Massachusetts Avenue and bounded by:

- Chandler Street to the north
- Slocum Road to the east
- Park Drive to the south
- Forest Street to the west

The study area has significant on and off-street parking assets, with more than 50 public and private lots in the Center. This includes not just Town-owned assets, but many privately-owned and restricted-use lots for customers of local businesses, visitors, employees, and specific user groups. On-street parking is also available throughout the study area, with mostly metered, two-hour restricted parking in the core of the Center.

Overall, the Lexington Center study area includes approximately 3,300 total parking spaces, with about 1,300 on-street and 2,000 off-street parking spaces.

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Figure 1 Lexington Center Parking Study Area



PARKING INVENTORY

A complete understanding of parking supply and regulations is the necessary base component to interpreting parking patterns and behaviors in Lexington Center. Working from a Town-developed parking inventory base, the team field-checked and updated the inventory by identifying all additional public assets, privately owned parking lots, and all on-street regulations. The inventory includes all parking within the defined study area, excluding small private driveways. This inventory was compiled and used to create a complete parking database of all parking facilities in the study area. The database was geo-coded to spatially display the existing parking facilities, which remained the base information used throughout the entire project.

PARKING INVENTORY: KEY FINDINGS

- There are approximately 3,300 parking spaces in Lexington Center
- 60% of parking spaces are off-street; 40% are on-street
- With the exception of loading zones, almost all marked on-street parking spaces are available for general use, meaning that anyone can park on-street, regardless of trip purpose (e.g. no "residential only" parking)
- Most of the off-street supply is restricted; only 17% of the off-street parking supply is available for general use
- More than 20 different types of on-street and off-street parking regulations and signage poses management and enforcement challenges

Figure 2 Parking Inventory Overview

Parking Location	Number of Spaces	Percentage	% Available for General Use	% Restricted Use
On-Street	1,342	41%	99%	1%
Off-Street	1,967	59%	17%	83%
Total	3,309	100%		

PARKING REGULATIONS

The team catalogued the ownership, use category, and regulation for all spaces within the study area. Figure 3 and Figure 4 summarizes the on- and off-street parking spaces by regulation. A full parking inventory map is depicted in Figure 5.

Figure 3 On-Street Parking Regulations and Supply

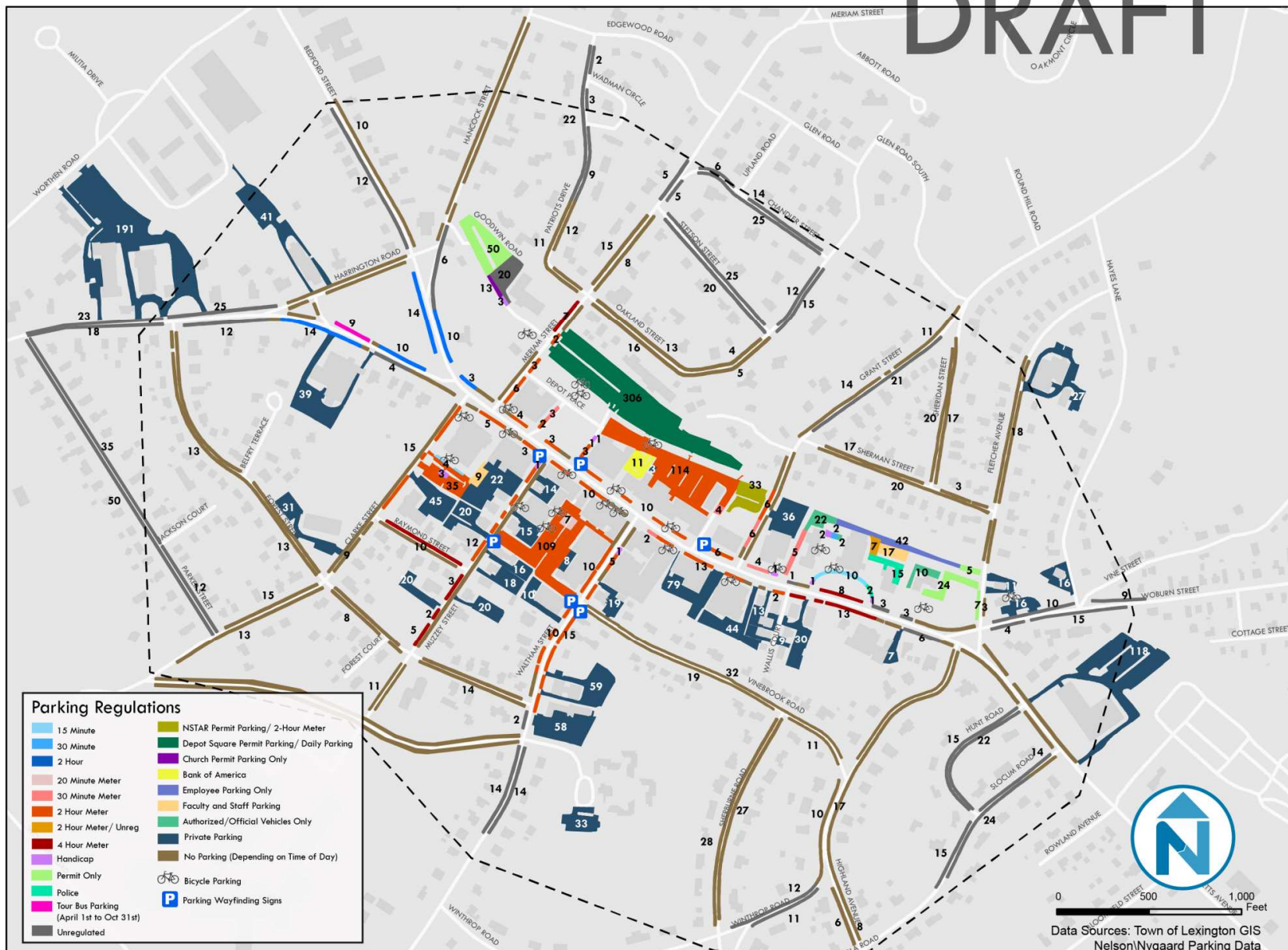
Regulation	# of Spaces	Percent of Total
Unregulated	575	42.8%
No Parking 6AM-10AM 2 Hour Parking 10AM-6PM M-F	218	16.2%
2 Hour Meters	145	10.8%
No Parking 6AM-6PM M-F	80	6.0%
No Parking 9AM-5PM M-F	62	4.6%
2 Hour Parking	51	3.8%
4 Hour Meters	48	3.6%
No Parking 6AM-10AM M-F	38	2.8%
No Parking 7AM-10AM 2 Hour Parking 10AM-6PM M-F	35	2.6%
No Parking 6AM-6PM M-Sat	17	1.3%
30 Minute Meters	16	1.2%
No Parking 7AM-3PM	11	0.8%
30 Minute Parking	10	0.7%
Handicap	9	0.7%
No Parking 8AM-6PM	10	0.7%
Tour Bus Parking Only Apr 1 - Oct 31	8	0.6%
Permit Parking	7	0.5%
Private Parking	2	0.1%
Total	1,342	

Figure 4 Off-Street Parking Regulations and Supply

Regulation	# of Spaces	Percent of Total
Private Parking	1254	63.8%
Permit & Hourly Parking	306	15.6%
2 Hour Meters	298	15.1%
Permit Parking Only	79	4.0%
30 Minute meters	9	0.5%
20 Minute Meters	7	0.4%
Handicapped Parking	8	0.4%
15 Minute Parking	4	0.2%
30 Minute Parking	2	0.1%
Total	1,967	

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Figure 5 Parking Inventory by Regulation



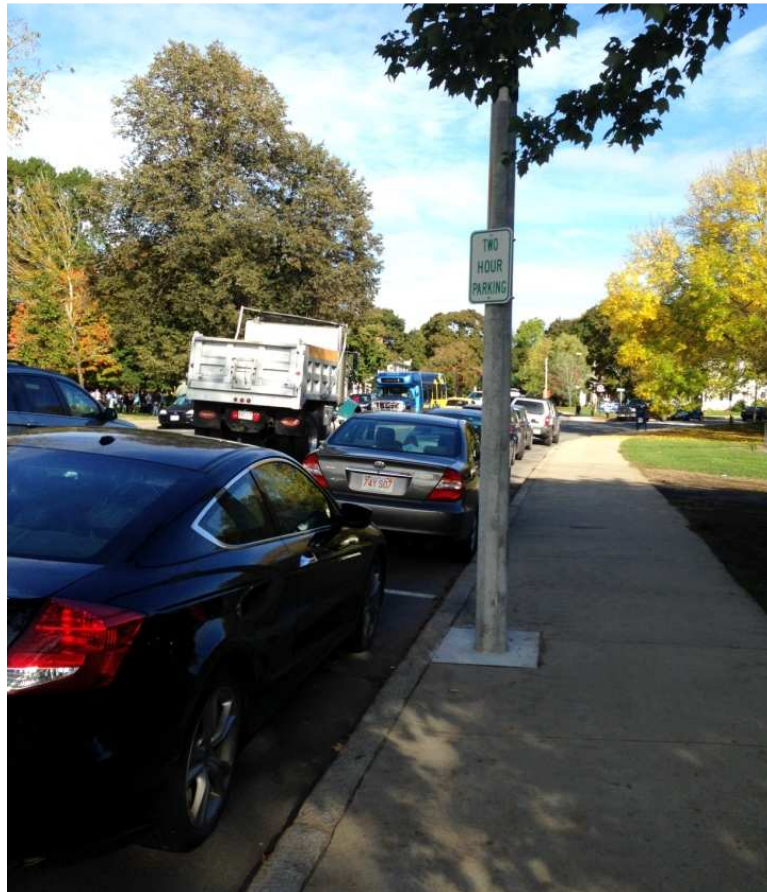
ON-STREET PARKING

Less than half of the parking assets within the study area are on-street parking spaces. A majority of the on-street parking within the study area is unregulated, meaning it is publicly accessible all day long, regardless of length of stay or time span. This includes many residential side streets directly surrounding the Center. Most of the central curbside spaces are regulated by meters and time limits.

Metered Parking: A small portion of the on and off-street supply in the Center is metered parking. Most of the metered on-street spaces reside in close proximity to the Center's shops and restaurants, located along Massachusetts Avenue, Waltham, Meriam, Grant, Muzzey, and Clarke Streets. 16% of all on-street parking is metered and consists of both short and long term meters, ranging from 30-minute to 4-hour meters. Meters are in effect from 8am to 8pm, Monday to Saturday, and cost \$0.25/ hour.

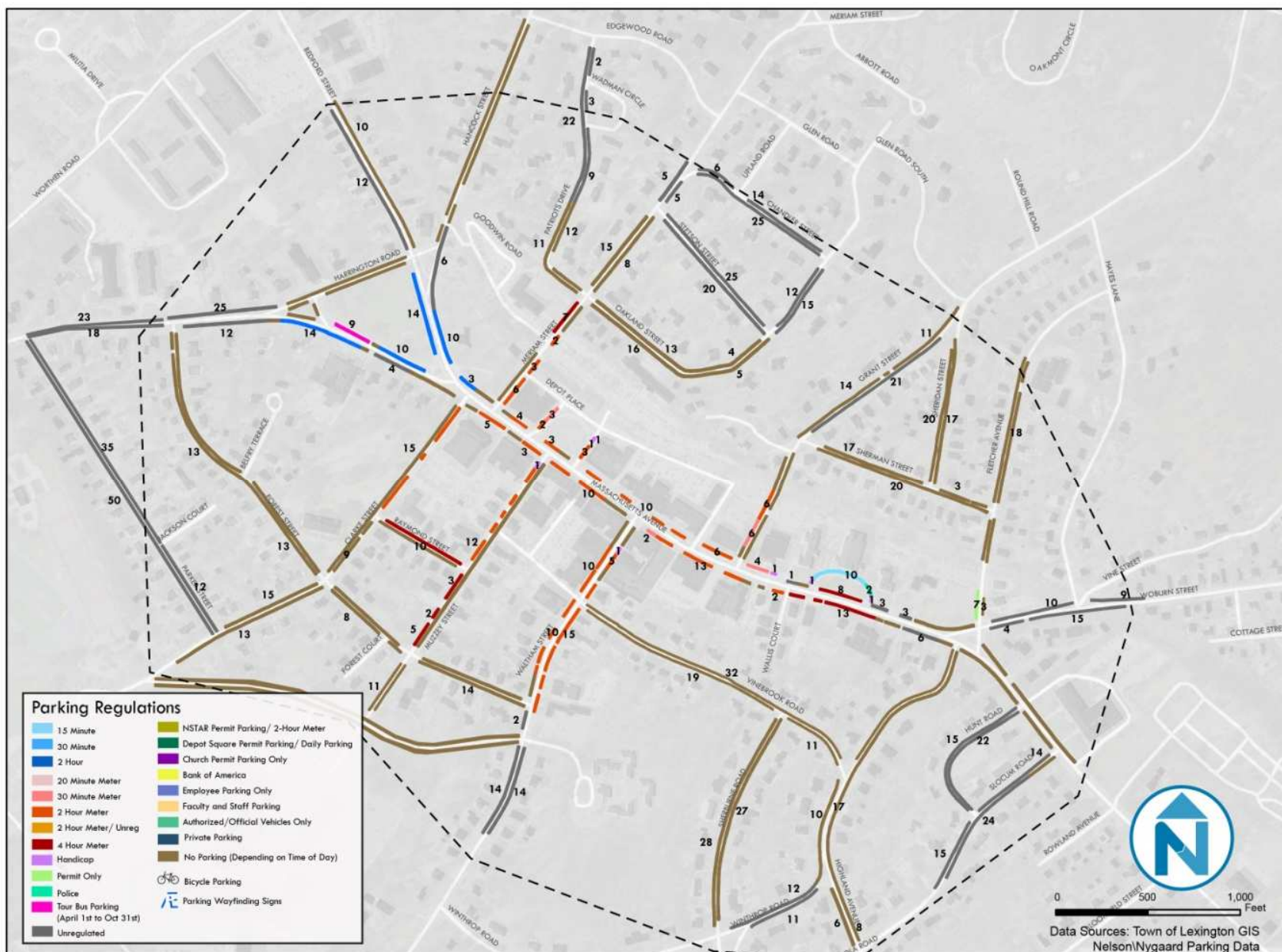
Time Limited Parking: A small percentage of on-street parking spaces in the Center are time-regulated and restricted. There are mainly two types of time limits: 1 and 2 hour spaces. These spaces are time-regulated to encourage parking turnover, preserving them for patrons of the shops and restaurants, and discouraging long-term employee parking. There are also a number of nearby side streets that have time limited parking during the day, with no parking restrictions during the peak morning and evening hours.

Unregulated Parking: For this analysis, unregulated parking is where there is no signage restricting or prohibiting parking, regardless of time of the day as well as duration. More than 40% of on-street spaces in the study area are unregulated. A number of these spaces are located in the Center-adjacent streets.



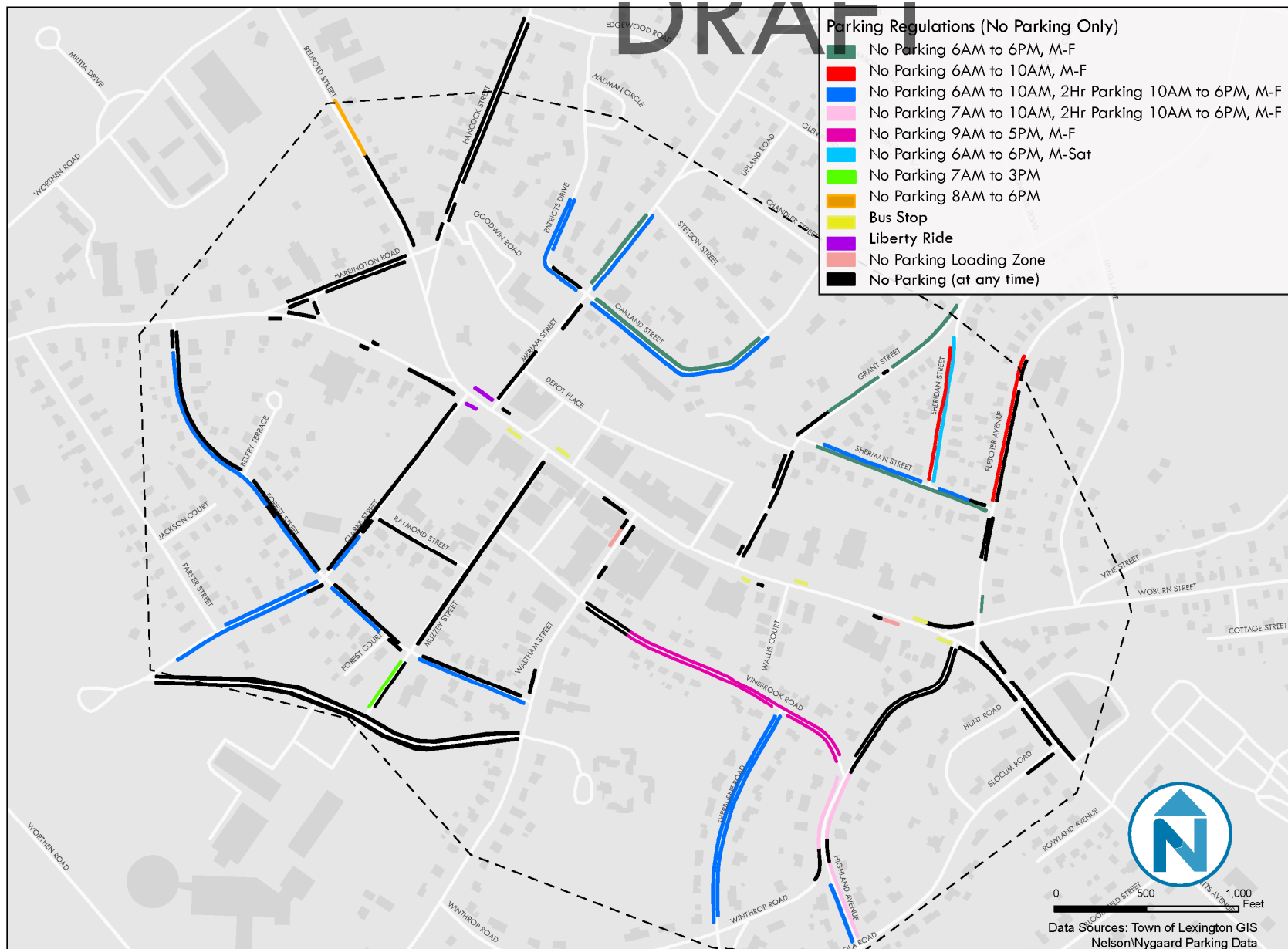
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Figure 6 Lexington Center On-Street Parking Regulations and Supply



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Figure 7 Lexington Center Parking – No Parking Regulations



OFF-STREET PARKING

For purpose of this study, off-street parking has been generally categorized in two ways to focus on who can use the parking:

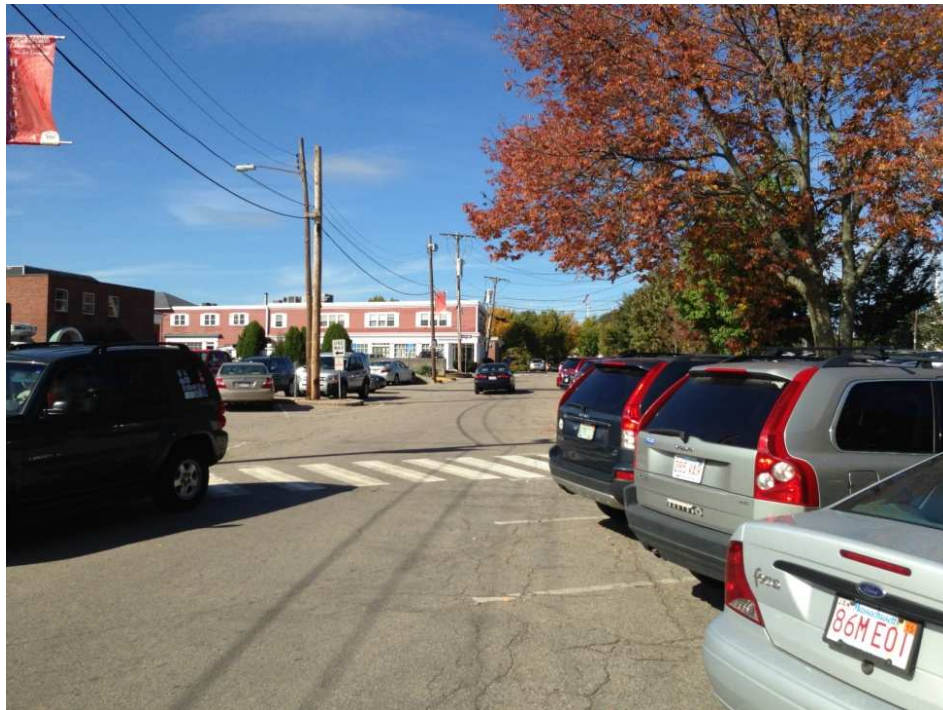
- *Publicly-accessible* parking is available for public use and may be owned by a public or private entity
- *Restricted-access* parking is dedicated to a specific population, including permit parking that may require a purchased parking permit and private parking lots that are restricted to particular customers, tenants, or employees of the (typically adjacent) use

Most off-street parking in the Center (83%) is restricted-access parking. Publicly-accessible and restricted-access off-street parking can be further categorized into specific regulations (Figure 8).

Metered Public Parking: A majority of the public off-street parking in the Center is metered parking. Most off-street public parking meters have time limits of either 30 minutes or 2 hours and are regulated similar to on-street meters spaces, spanning from 8am to 8pm and at a cost of \$0.25/hour. Metered public parking lots include the Waltham Lot, Edison Lot, NSTAR Lot, and Cary Library Lot. Parking is free after 8pm and on Sundays and holidays.

Permit Parking Only: The Town issues employee permits that allow parking in a number of locations throughout the Center. Town permits are issued on an annual basis, and consist of a total of 187 parking spaces in three lots: Depot Square Lot, Church of Our Redeemer, and Town Hall Lot.

Mixed Public Parking: Mixed public parking refers to off-street parking lots that allow for both Town issued permits and daily parkers. The Depot Lot and the NSTAR Lot allow for Depot Square Permit and NSTAR permits to park all day; however, daily users can use the facility (and pay up to \$2/day) in the Depot Lot and park in the NSTAR lot (\$0.25/hour for up to 2-hours).



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Figure 8 Lexington Center Off-Street Parking Regulations and Supply



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Figure 9 Lexington Center Off-Street Parking – Publicly Accessible vs. Restricted Spaces



Permit Program

Lexington's Parking Permit provides any registered Center employees dedicated off-street parking spaces in one of three parking lots. Providing employees off-street parking helps to free up prime and desirable on-street meter spaces for customers and visitors. Currently, the permit parking program consists of 187 parking permit spaces in three lots within Town Center: the Depot Lot, Church of Our Redeemer, and the Town Hall Lot.

Figure 10 Parking Permit Program in Town of Lexington

Parking Lot	# of Permits Available	Permit Price	# of Permits Sold According to LPD Records	Designated Permitted Spaces	Total # of Spaces
Depot Lot	117	Annual fee \$250	132	300*	306
Church of Our Redeemer	75	Annual fee \$225	74**	50	84
Town Hall	20	Annual fee \$225	36	36	163
TOTAL	212		242	386	553

Additional Notes:

* Depot Lot does not designate between permitted and hourly spaces

** 21 permits are issued to part-time Library employees

The permit can be used for the parking for one of up to five authorized vehicles, but is only valid for one vehicle at a time. All parking permit are issued on an annual basis. Figure 10 indicates that the Town sold more permits than the actual permit parking spaces available. But still, from the year 2010, there has been a wait list for the parking permit program (Figure 11). Total number of permits requested has reached 195, indicating a demand for an expansion of the permit program.

Figure 11 Permit Wait List Since 2010

Location	# Permits Requested	# of Individuals/ Companies on List
Depot	106	53
Town Hall	4	3
First Available	42	33
Depot or Town Hall	12	5
Depot or Church	31	14

Police Department, Town of Lexington

PARKING UTILIZATION

Parking utilization counts provide a time series of typical parking use for a typical day in an area. To gather this data, the team counted parked cars in each on-street segment or lot at pre-determined time intervals. Land usage, regulation, price, and signage can drastically impact how even adjoining parking assets are utilized. By compiling parking utilization spatially, one can begin to clearly identify patterns of high or low usage, the impact of regulations, and assess how much of the parking supply is actually utilized throughout a typical day.

Town staff and the consultant team conducted parking utilization counts on a weekday and a weekend day in October 2013. Data collectors captured weekday parking demand for 16 hours, beginning at 7:30 a.m. and ending at 11:30 p.m., with counts every two hours. Data collection began in the early morning to identify if/when employee parking would fill to capacity; evening activity until 11:30 p.m. was evaluated to show patterns associated with the Town's restaurants and other evening activities. Weekend parking data was collected for 10 hours, beginning at 9:30 a.m. and ending at 7:30 p.m., as there are fewer activities in the Center in the early morning or late at night on weekends.

METHODOLOGY

It is important to note that the individuals collecting data methodically counted each on-street segment and off-street lot at regular intervals. For example, if a lot was counted at 7:35 a.m. in the first loop, then it was counted at 9:35 a.m. in the second loop, etc. This consistency ensured data accuracy and helped draw conclusions about trends within two-hour windows. Counts were taken during fair weather conditions, typical fall days. Data collection was coordinated in advance with the Town staff, including the Lexington Police Department, to ensure that there were no special events or construction that would unduly influence parking utilization.

Data collected was also corroborated with other Town counts collected by the consultants spearheading the Center Streetscape Plan. The October 2013 parking counts by Nelson\Nygaard were consistent with the counts completed by this team in August 2013, helping to validate that this data was consistent with other times of year.

SPATIAL PATTERNS

Understanding how Lexington Center parking is used requires being able to describe how parking facilities and on-street parking interact with each other throughout the course of a day. A chart of hourly utilization rates for one specific location is valuable, but seeing how that location behaves among others located nearby can reveal patterns and trends not evident in numbers alone. The lot which is completely full may be right around the corner from another lot that has plenty of availability at the same time.

Using the utilization data, the consultant team developed a series of maps based on the parking inventory map. Color represent the percentage of spaces utilized at each location based on notable breaks used to evaluate the adequacy of a parking facility:

- **“Cool” light blue/blue** refers to 0-80% utilization, a point at which on-street blocks and off-street facilities are viewed as underutilized. Any resource that consistently performs at this level, especially during peak-demand periods should be viewed as excess capacity.
- **“Ideal” green** refers to blocks and facilities with 81% to 90% utilization, and represent actively used resources. Particularly for off-street facilities, the nearer utilization levels approach the high end of this range, the more efficiently they are being utilized.

- **“Warning” pink** refers to utilization about 91% and is considered at capacity. While maximizing efficiency, these blocks often look or “feel” full to drivers, and can consequently give the impression of lack of parking.
- **“Critical” red** denotes parking beyond the marked capacity. Resources that consistently perform at this level will generate common perceptions of lack of parking options.

The analysis on the following pages show the parking utilization profiles throughout the collection days in the Center. They are displayed in a variety of sub-sets: the entire study area, particular blocks and lots, and core areas of demand. The red lines indicate “functional capacity” of parking¹, i.e. a vacancy of 15-percent on-street, or about 1 out of 8 on-street spaces is available and ninety-percent for off-street lots, a recognized national standard of when a parking area is effectively full.

WEEKDAY PARKING UTILIZATION

WEEKDAY PARKING UTILIZATION: KEY FINDINGS

- **Morning:** There is little on-street demand during the early morning hours; however, where there is demand, it is mainly concentrated west of Waltham along Mass Avenue (and off-street in the Cary Library and Town Hall lots)
- On-street parking demand peaks during the early afternoon around 11:30am, where almost 80% of on-street spaces are utilized
- **Afternoon:** The overall peak of daytime demand is from 1:30 p.m. to 3:30 p.m., where over 85% of public off-street parking is full
- Afternoon demand is concentrated on several lots along the Massachusetts Avenue corridor (Depot Lot, Waltham Lot, Edison Lot, portions of Town Hall lot, and the Cary Library Lot).
- During the peak, on-street spaces on the side streets off the main corridor show plenty of availability as well as private off-street lots located along Mass Ave.
- **Late Afternoon:** Overall parking demand in the Center drops significantly in the afternoon; on-street parking demand is concentrated around Muzzey Street, Waltham Street, and Mass Ave. Off-street demand is still concentrated within the Depot Square Lot, Waltham, and Cary Library Lots
- **Evening:** Around 7pm, off-street demand is at one of the lowest demand periods with most activity along Mass Avenue and portions of Waltham Street.
- Throughout the course of the day, the Depot Lot is the most heavily utilized off-street public parking facility

Figure 12 to Figure 19 show weekday time series utilization spatially in two-hour increments.

¹ Best national parking management practice suggests that parking is functionally full at 85% on-street (about one of every seven spaces is available) and 90% off-street.

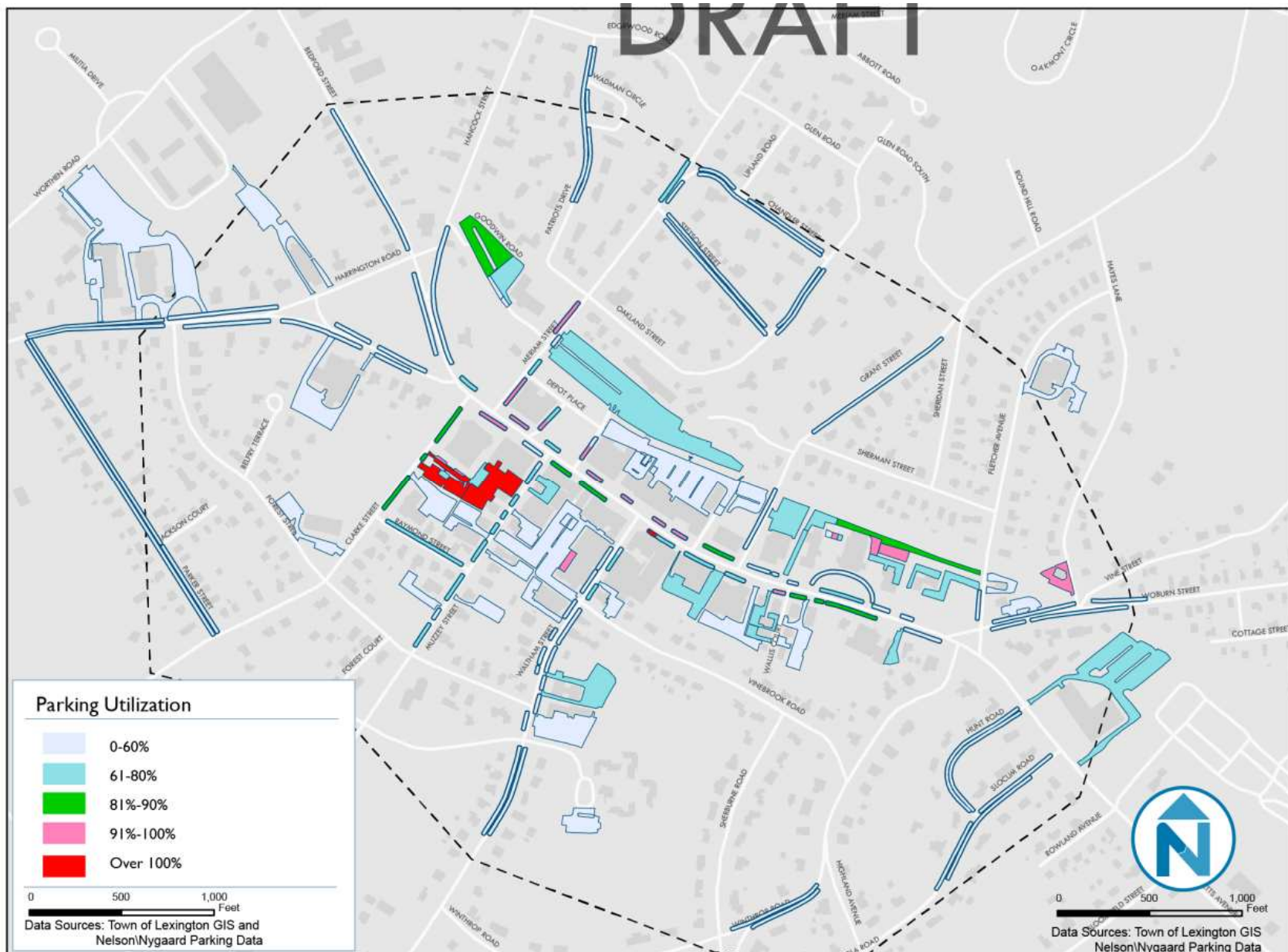
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Figure 12 Lexington Center Parking Utilization – Thursday 7:30 a.m.



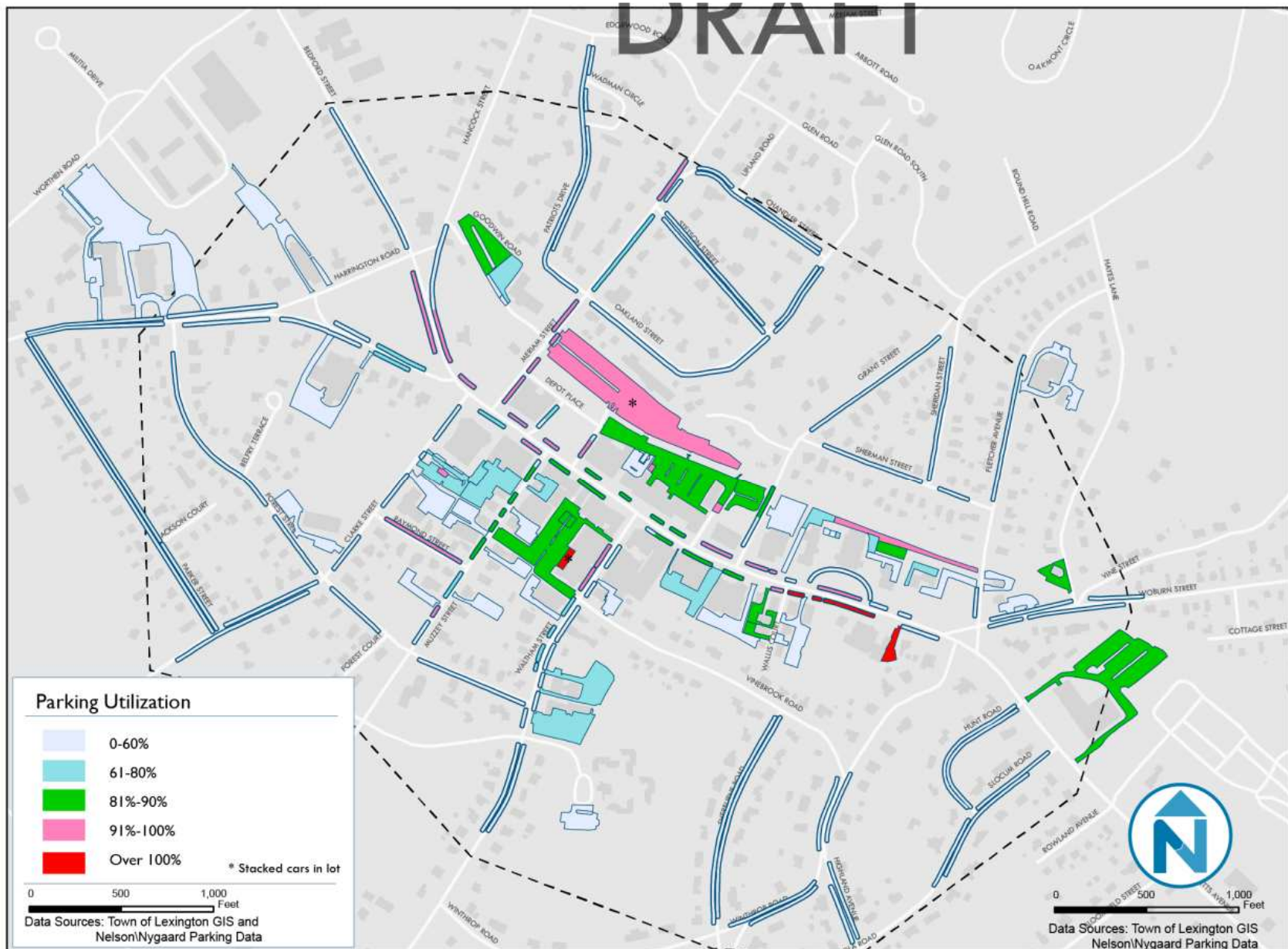
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Figure 13 Lexington Center Parking Utilization – Thursday 9:30 a.m.



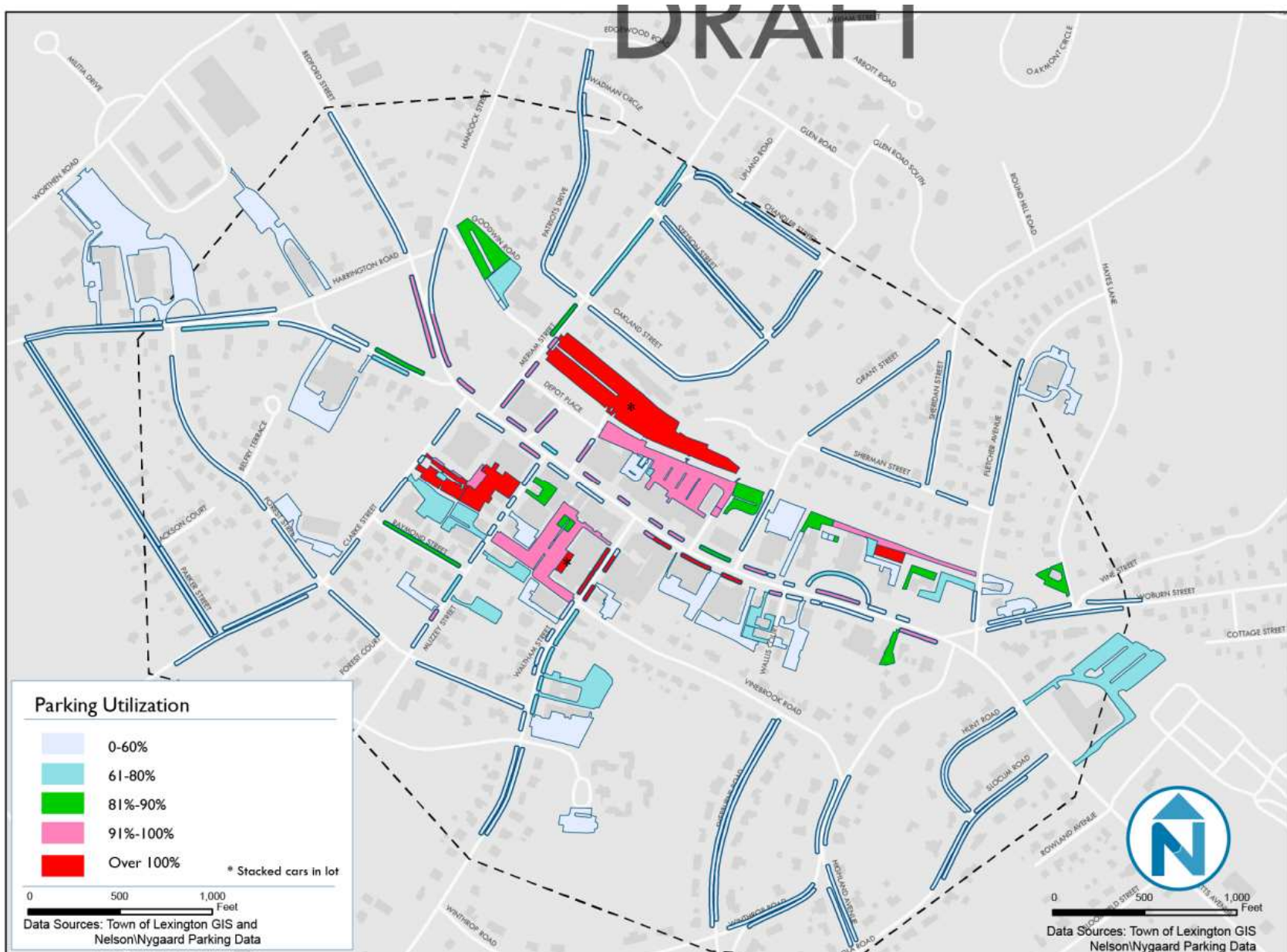
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Figure 14 Lexington Center Parking Utilization – Thursday 11:30 a.m.



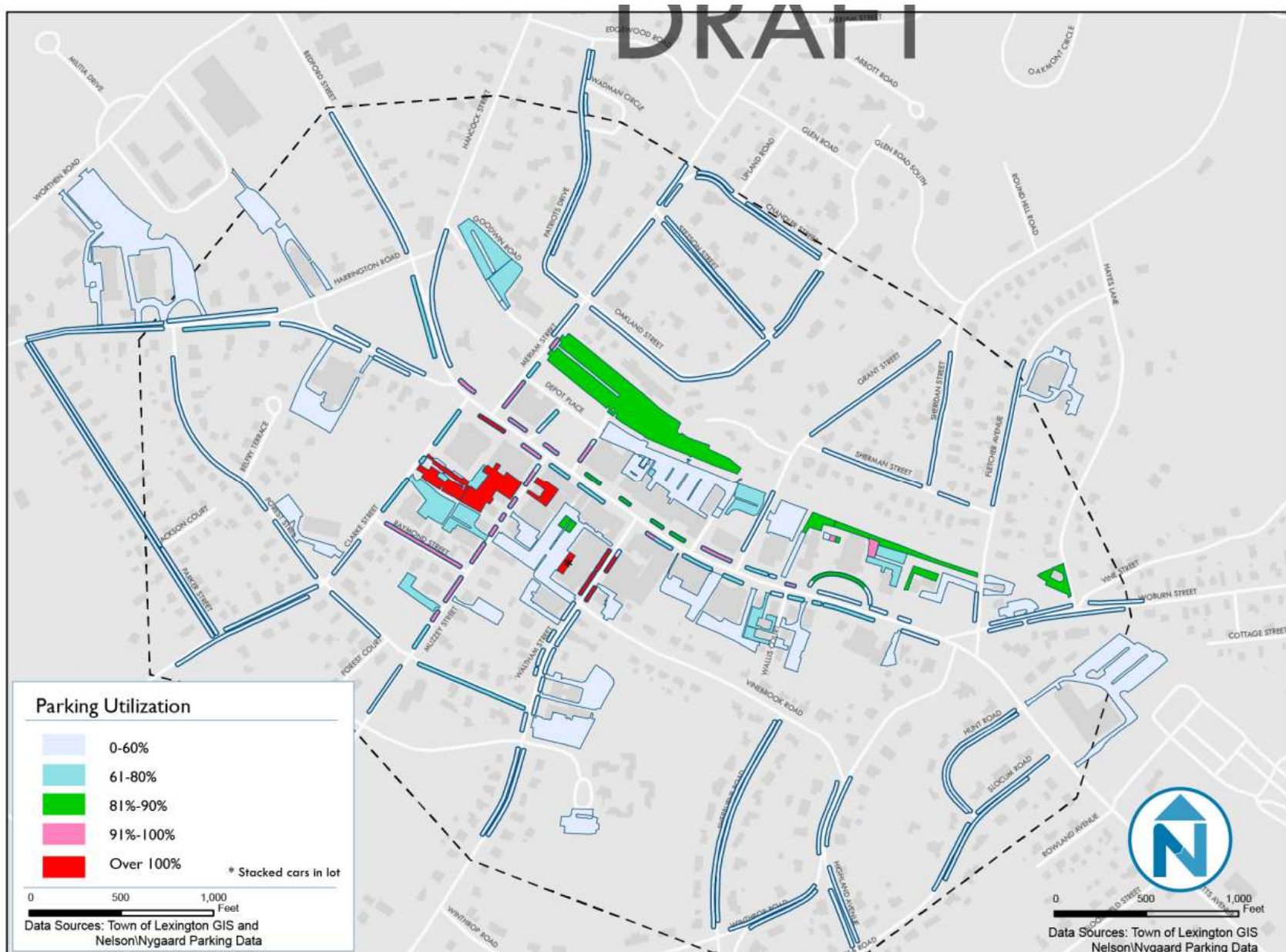
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Figure 15 Lexington Center Parking Utilization – Thursday 1:30 p.m.



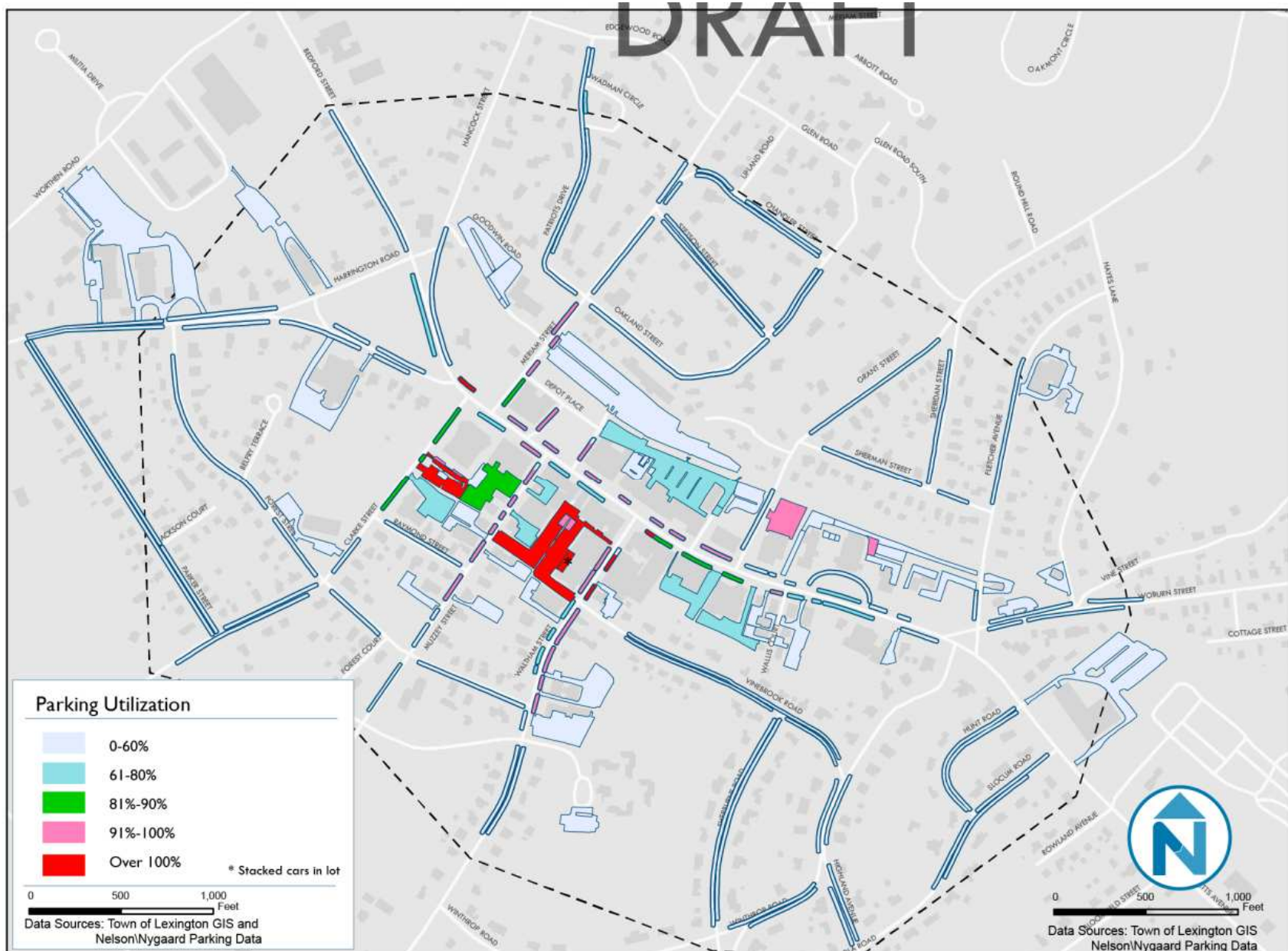
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Figure 16 Lexington Center Parking Utilization – Thursday 3:30 p.m.



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Figure 17 Lexington Center Parking Utilization – Thursday 5:30 p.m.



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Figure 18 Lexington Center Parking Utilization – Thursday 7:30 p.m.



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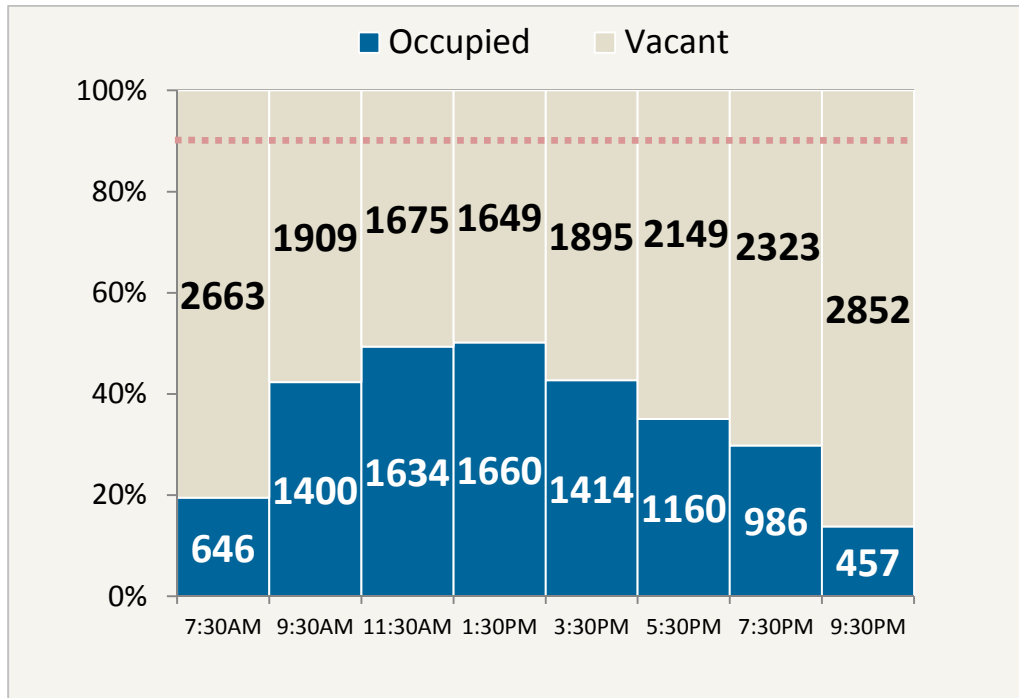
Figure 19 Lexington Center Parking Utilization – Thursday 9:30 p.m.



All Parking Spaces – Weekday

As shown in Figure 20, of the 3,309 spaces within the Lexington Center study area, the maximum overall utilization observed was 50% (1,660 spaces) between 1:30 p.m. and 3:30 p.m. This is likely due to the counts being taken on a Thursday, where public school lets out early for the afternoon. Compared to the 90-percent optimal occupancy, these results indicate that the study area as a whole has more than adequate parking supply to satisfy its demand – in fact, for all other intervals such as early in the morning and after 5:30 p.m., the majority of the parking supply was unused, including all parking spaces in the study area, that are either public, private or restricted.

Figure 20 Study Area Parking Utilization - Weekday



Publicly Accessible Parking Spaces – Weekday

Figure 21 shows peak public parking utilization is 97% (671 occupied out of 674 total public spaces) between 1:30 p.m. and 3:30 p.m. Only 3 vacant public spaces remained, indicating that publicly accessible parking is utilized to more than capacity in the middle of the day. This chart depicts the parking constraints and frustrations that customers, employees, and residents feel during the lunch time peak hour. From 11:30-1:30pm, there is little to no capacity left in the publicly accessible spaces where the general public is able to park.

Restricted Access Parking Spaces – Weekday

Figure 22 shows that the peak private parking utilization of 55% (713 occupied out of 1,293 total private spaces) occurred between 11:30 a.m. and 1:30 p.m., leaving about 580 vacant private spaces in the study area throughout the day. While public spaces are at capacity during the lunchtime peak period, there is ample private supply that is being underutilized during the same time period.

Figure 21 Study Area Boundary Parking Utilization – Thursday Publicly Accessible Parking

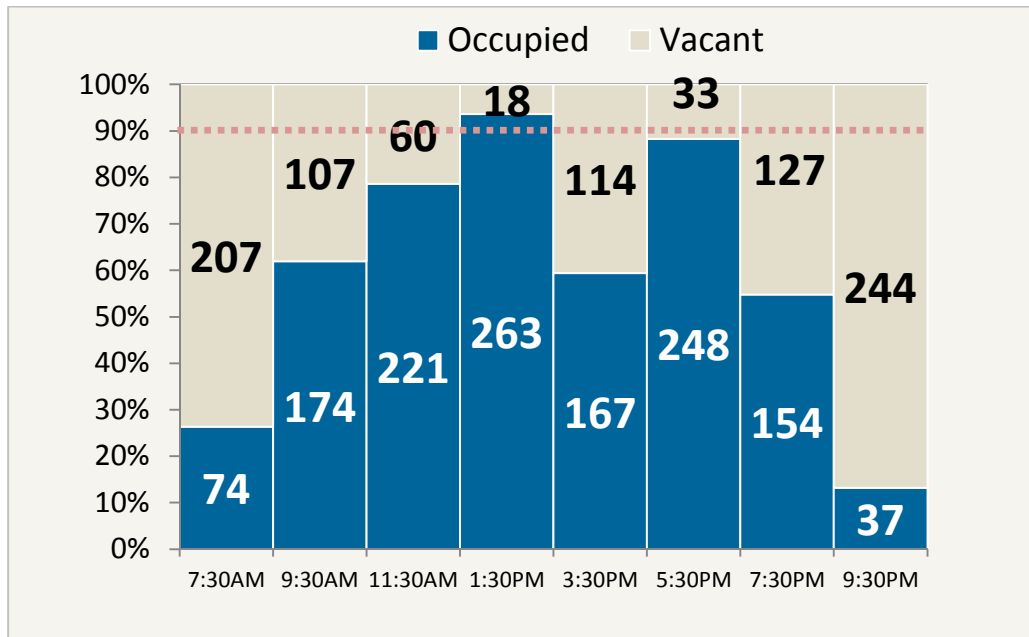
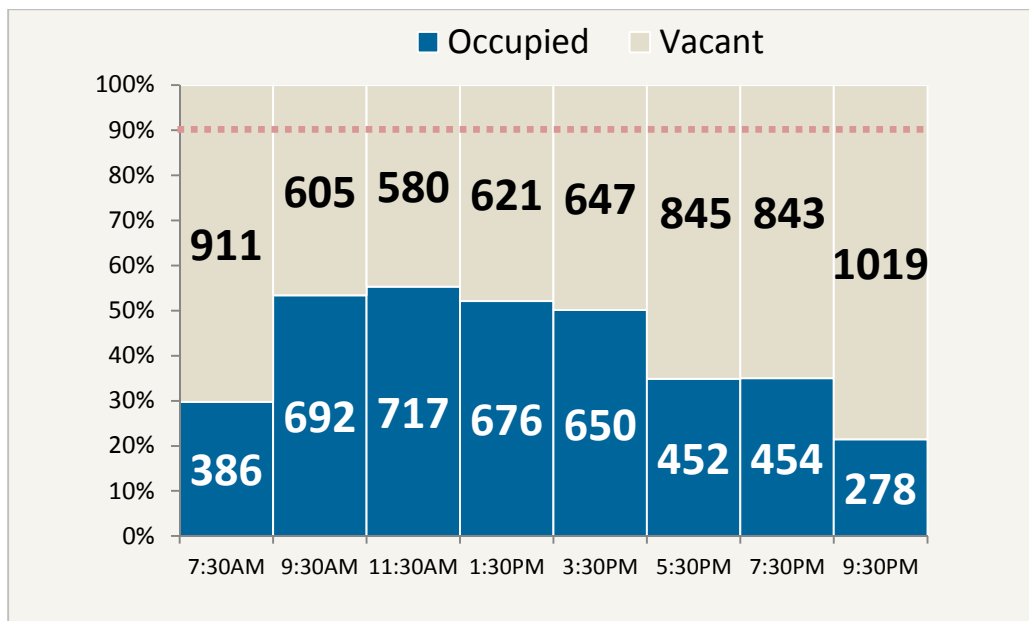


Figure 22 Study Area Boundary Parking Utilization – Thursday Restricted Parking



Focus Areas – Weekday

A number of focus areas were examined to create a better understanding of parking utilization within different sub-areas in the Center. The overall utilization of the entire study area may hover around 50% at peak, but parking demand is not uniform throughout the study area. There are pockets of high activity and areas where parking demand is very low. The series of charts on the following pages show parking utilization profiles in selected focus areas.

WEEKDAY FOCUS AREAS: KEY FINDINGS

- The area of highest demand in the Town is concentrated along Mass Avenue and about one to two blocks south of the main street.
- Utilization in the core area along the Massachusetts Avenue is high with little availability
- Both on- and off-street parking spaces are well utilized in the core area, reaching peak capacity mid-day
- On-street parking within the core boundary is consistently utilized throughout the day (60-70% full); however, off-street parking demand drops progressively after the lunch time peak period.
- The overall utilization within the Business District Boundary is relatively low, with a peak 60% utilization between 1:30 p.m. and 3:30 p.m.
- Utilization of the Battle Green area varies throughout the day, reaching a peak of 60% during lunch time



Figure 23 Core Boundary

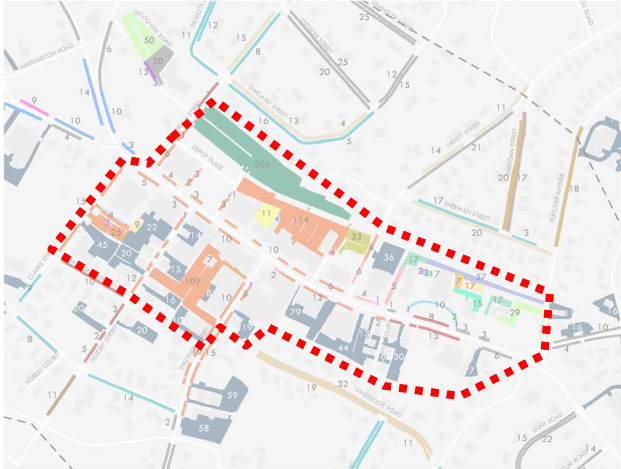


Figure 24 Core Boundary Parking Utilization - Weekday

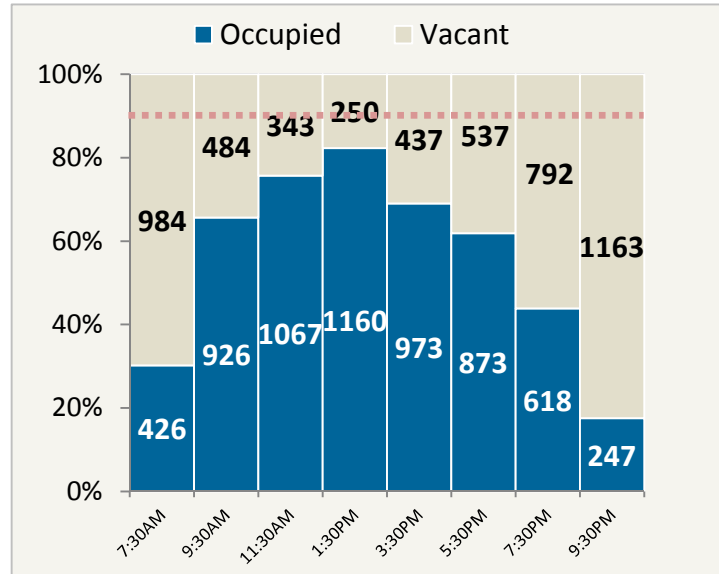


Figure 25 Core Boundary On-Street Utilization - Weekday

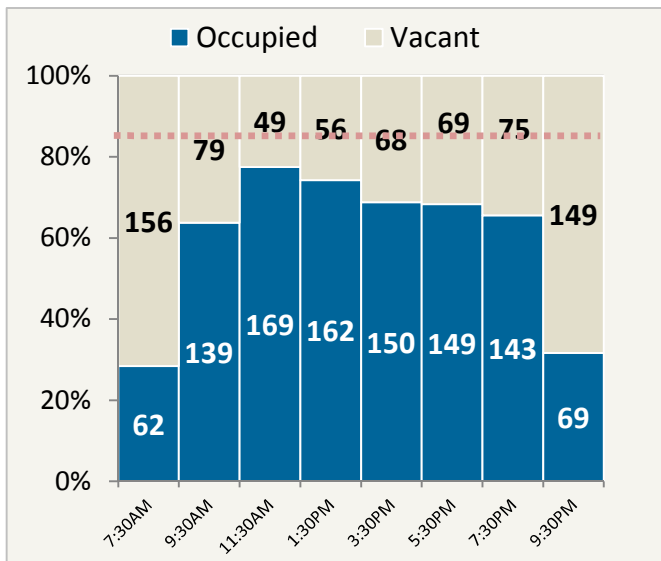
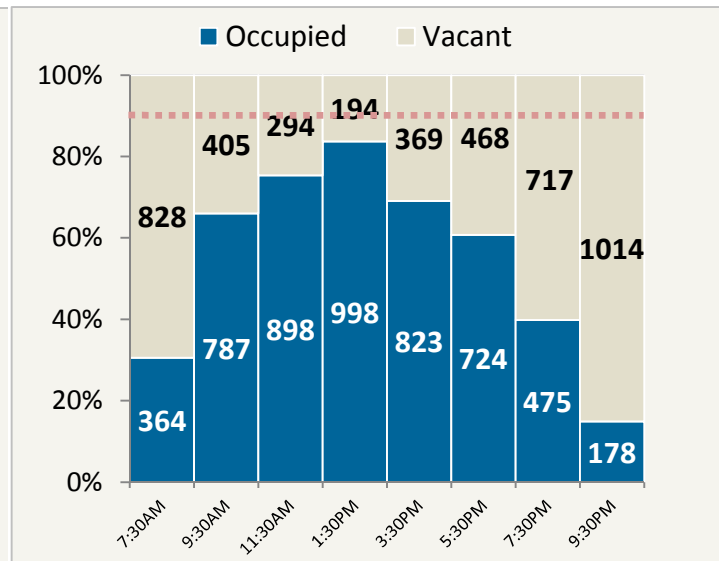


Figure 26 Core Boundary Off-Street Utilization - Weekday



Town of Lexington

Figure 28 Business District Parking Utilization - Weekday

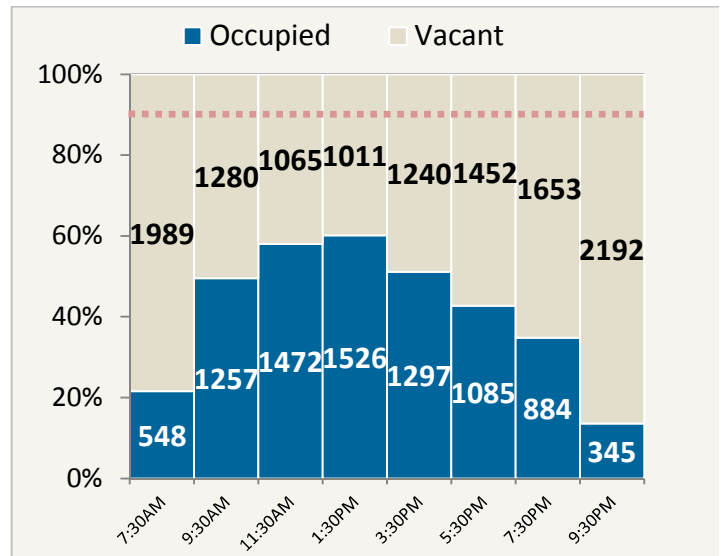
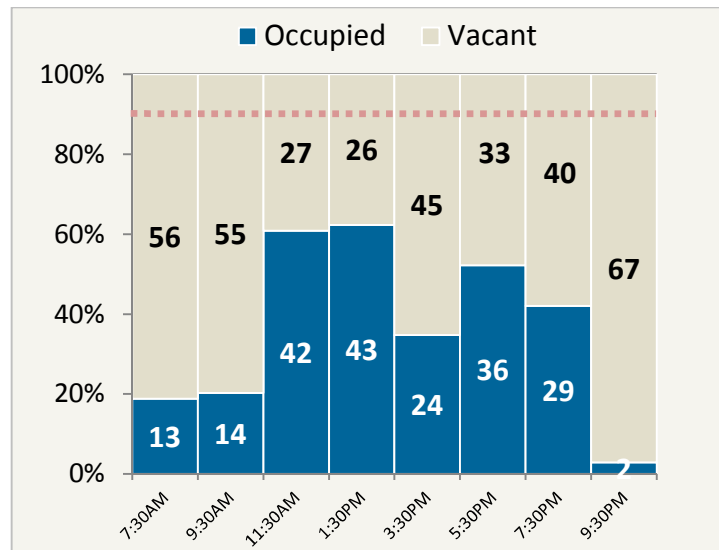


Figure 30 Battle Green Boundary Parking Utilization - Weekday



WEEKEND PARKING UTILIZATION

WEEKEND PARKING UTILIZATION: KEY FINDINGS

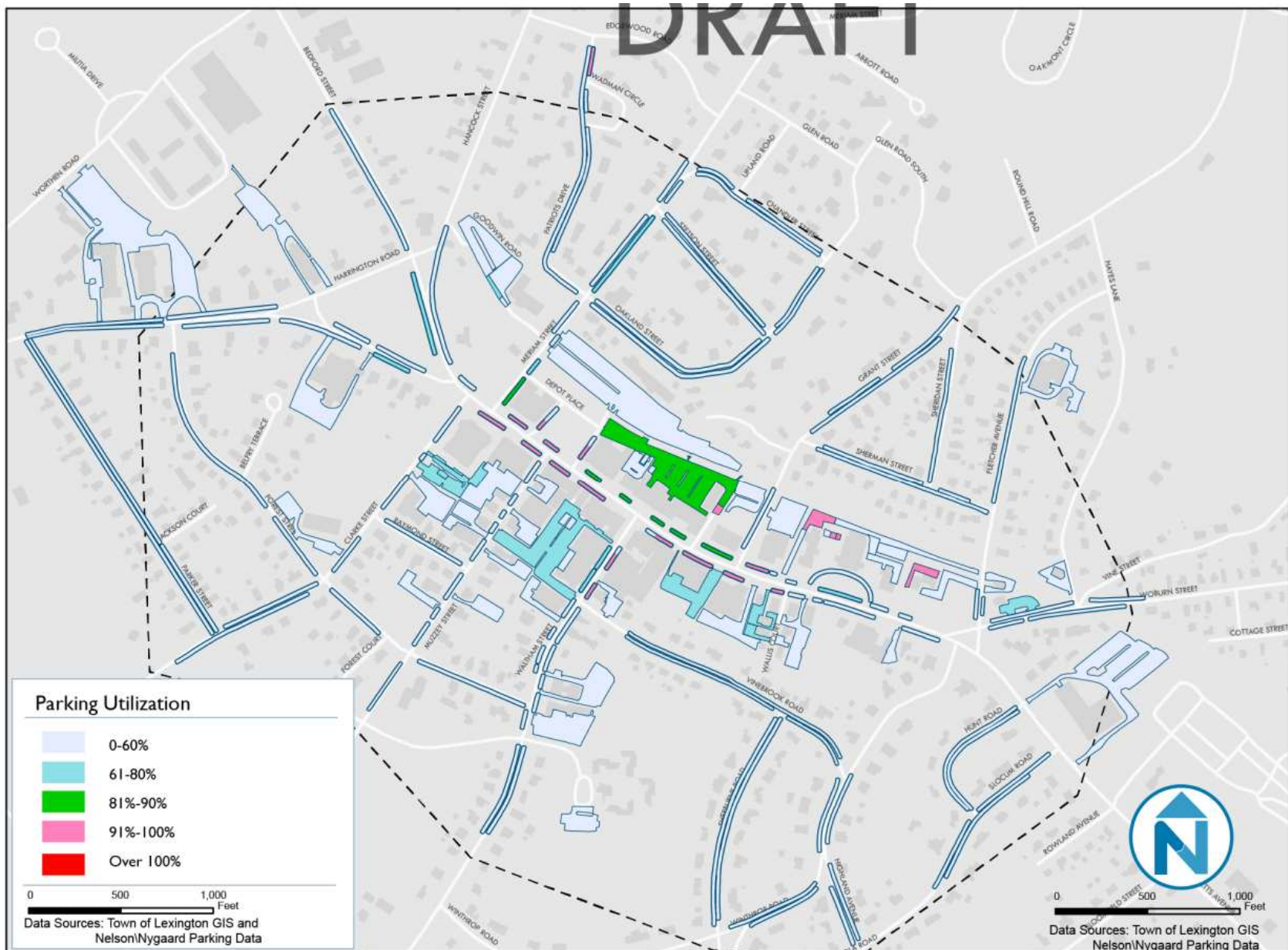
- Weekend demand was much lower than weekday demand with a peak utilization of 40% (1,337 out of 3,309 spaces) between 1:30 p.m. and 3:30 p.m.
- Areas of heaviest utilization were concentrated in destinations for customers and visitors, such as the Edison Lot, the Library Lot, and the Church Lots.
- **Morning:** On-street parking demand is primarily concentrated along Mass Avenue, and the first few blocks of Muzzey, Waltham, and Meriam Street; public metered lots, such as Waltham, Cary Library, and Edison Lots show signs of moderate activity
- **Afternoon:** Peak utilization along Mass Avenue
- **Evening:** On-street parking along Mass Avenue, Waltham, and Meriam Streets are in highest demand, while public off-street parking facilities have ample supply available.

Weekend time series utilization patterns are displayed in maps from Figure 31 to Figure 36.



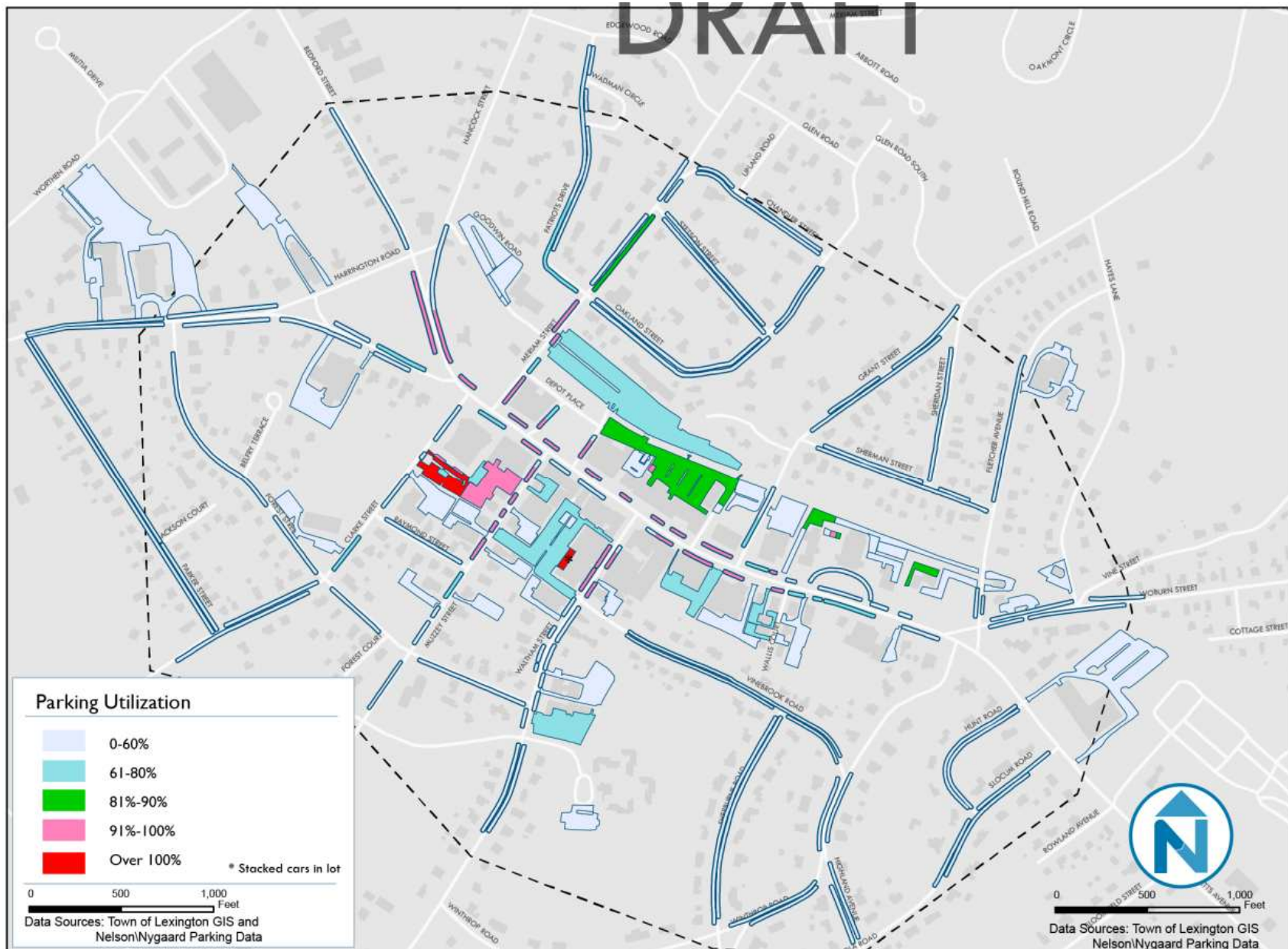
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Figure 31 Lexington Center Parking Utilization – Saturday 9:30 a.m



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Figure 32 Lexington Center Parking Utilization – Saturday 11:30 a.m.



Town of Lexington

DRIFT



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Figure 34 Lexington Center Parking Utilization – Saturday 3:30 p.m.



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Figure 35 Lexington Center Parking Utilization – Saturday 5:30 p.m.



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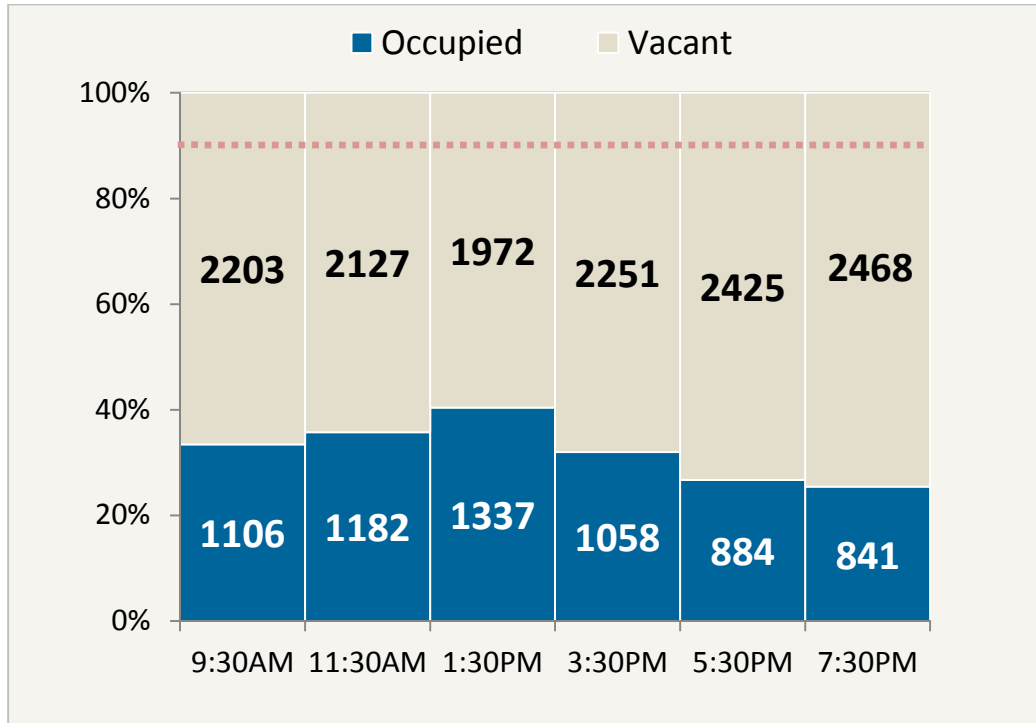
Figure 36 Lexington Center Parking Utilization – Saturday 7:30 p.m.



All Parking Spaces - Weekend

As shown in Figure 37, of all 3,309 spaces counted in the Lexington Center study area, the maximum utilization was 40% (1,337 spaces), which occurred between 1:30 p.m. and 3:30 p.m. Compared to the 90-percent optimal occupancy, these results indicate that the study area has more than sufficient parking supply to satisfy its demand on weekend.

Figure 37 Study Area Boundary Parking Utilization - Weekend



Focus Areas – Weekend

The same focus area boundaries examined for the weekday were applied to the Saturday utilization data.

WEEKEND FOCUS AREAS: KEY FINDINGS

- Overall, parking is 40% full at peak
- On-street parking is significantly busier than off-street
- Very difficult to find a space on Mass Ave
- The Cary Library Lot is the busiest lot, followed by the Edison Lot
- Core area reaches 60% full mid-day

Stacked bar chart showing the percentage of occupied and vacant parking spaces at different times of the day. The Y-axis represents the percentage from 0% to 100%. The X-axis shows time intervals: 9:30AM, 11:30AM, 1:30PM, 3:30PM, 5:30PM, and 7:30PM. The legend indicates that blue represents 'Occupied' and beige represents 'Vacant'. A red dashed line is drawn at the 90% mark.

Time	Occupied (%)	Vacant (%)
9:30AM	53%	47%
11:30AM	57%	43%
1:30PM	61%	39%
3:30PM	50%	50%
5:30PM	40%	60%
7:30PM	36%	64%

Time	Occupied (%)	Vacant (%)
9:30AM	61%	39%
11:30AM	63%	37%
1:30PM	72%	28%
3:30PM	57%	43%
5:30PM	51%	49%
7:30PM	61%	39%

Stacked bar chart showing the percentage of occupied and vacant rooms at the Grand Hotel by time of day. The Y-axis represents the percentage from 0% to 100%. The X-axis shows time intervals: 9:30AM, 11:30AM, 1:30PM, 3:30PM, 5:30PM, and 7:30PM. The legend indicates that blue represents 'Occupied' and tan represents 'Vacant'. A red dashed line is drawn at the 90% mark.

Time	Occupied (%)	Vacant (%)
9:30AM	52%	48%
11:30AM	56%	44%
1:30PM	60%	40%
3:30PM	48%	52%
5:30PM	37%	63%
7:30PM	31%	69%

[illegible]

Occupied **Vacant**

Time	Occupied (%)	Vacant (%)
9:30AM	38%	62%
11:30AM	43%	57%
1:30PM	48%	52%
3:30PM	37%	63%
5:30PM	31%	69%
7:30PM	29%	71%

Figure 44 Battle Green Boundary

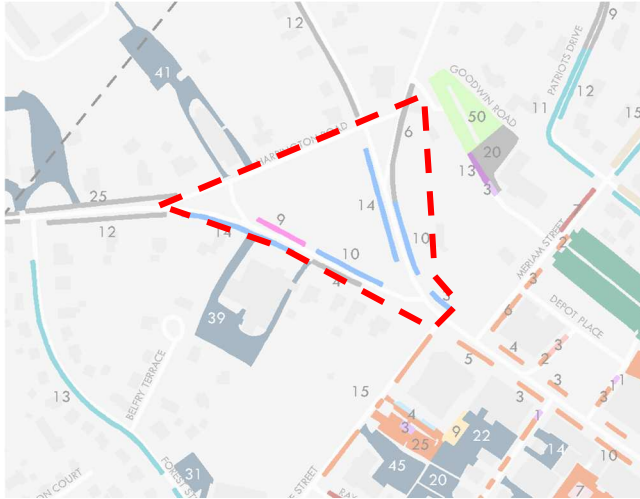
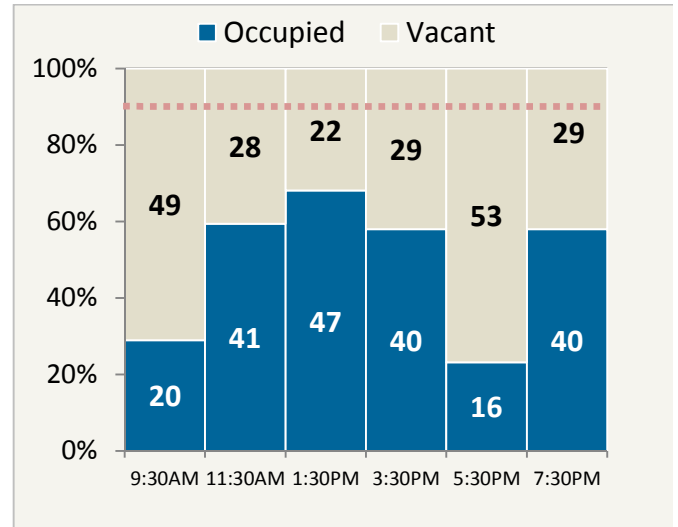


Figure 45 Battle Green Boundary Utilization - Weekend



PERMIT PARKING UTILIZATION

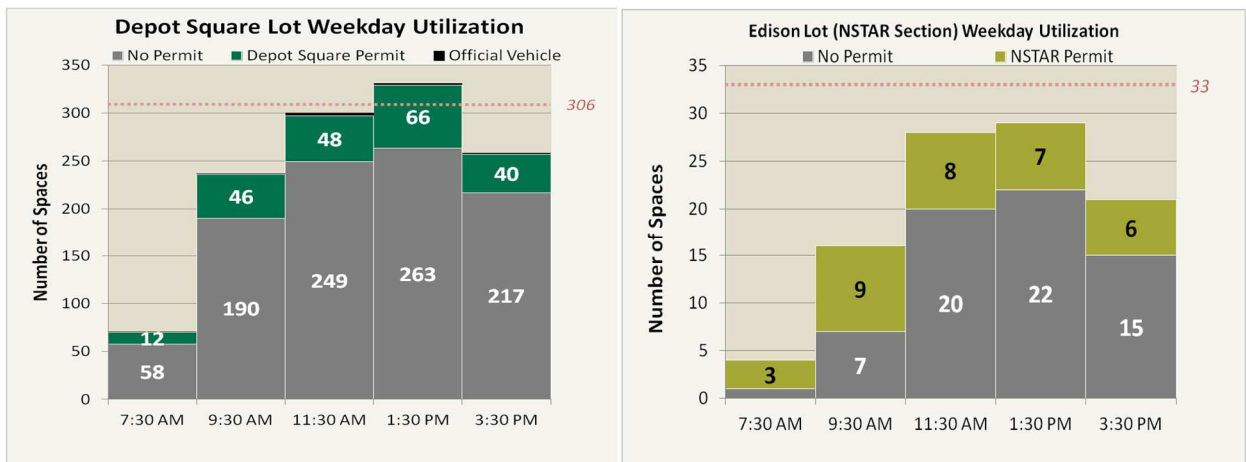
There are a number of off-street locations throughout Lexington that accommodate the Town's permit parking program. As part of the utilization survey analysis in late October and early November, vehicles parking in permitted lots such as the Depot Lot, Church of Our Redeemer Lot, and Town Hall Lot were counted and permit hangtags were recorded based on permit type. It should be noted that efforts to encourage permit holders to display hangtags on the utilization dates were taken. The following analysis indicates some key findings from the permit utilization analysis.

Parking Lot	# of Permits Available	Designated Permitted Spaces	Total # of Spaces
Depot Lot	117	300*	306
Church of Our Redeemer	75	50	84
Town Hall	20	36	163
TOTAL	212	386	553

PERMIT PARKING UTILIZATION: KEY FINDINGS

- A majority of parkers at the Depot Lot do not display permits, as they typically flash their permit to the Attendant and then do not display it
- Most parkers at the Church of Redeemers are permit holders; there is some Depot Lot spillover in the early afternoon
- Most of the NSTAR lot is used by public parkers, not permit holders
- The Town Hall paid permit area has the most capacity, even at peak
- There is little weekend permit use

Figure 46 Permit Parking Utilization Analysis: Weekday



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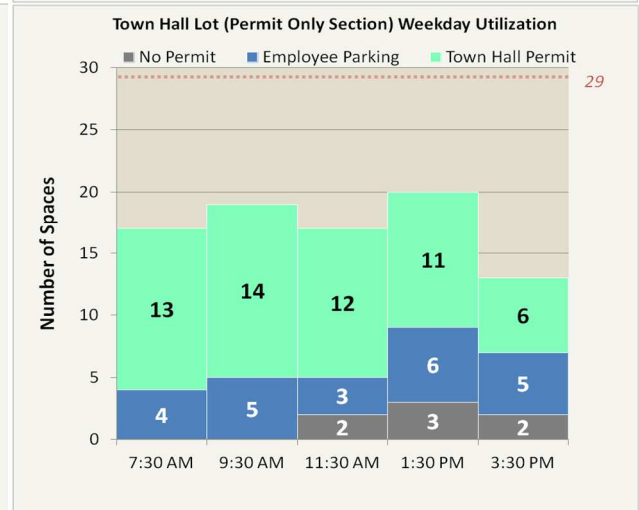
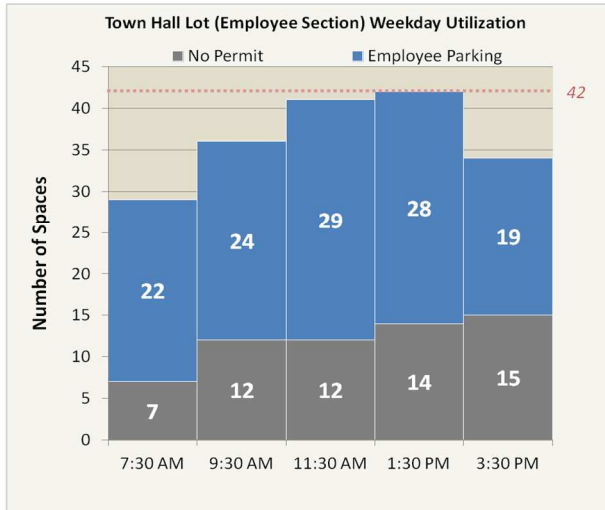
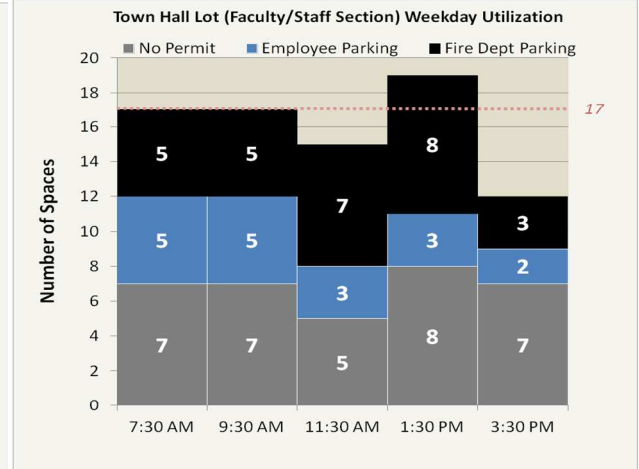
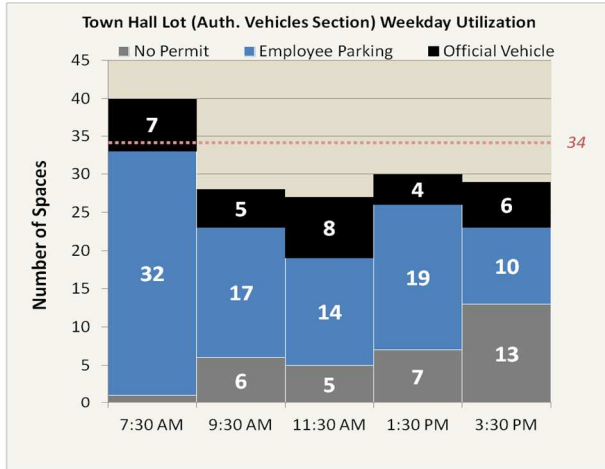
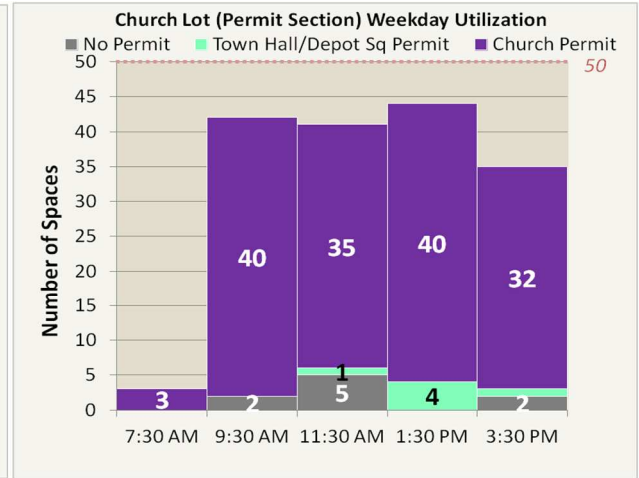
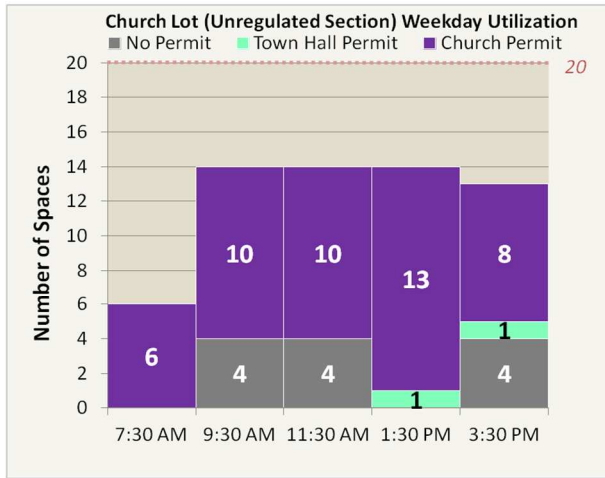
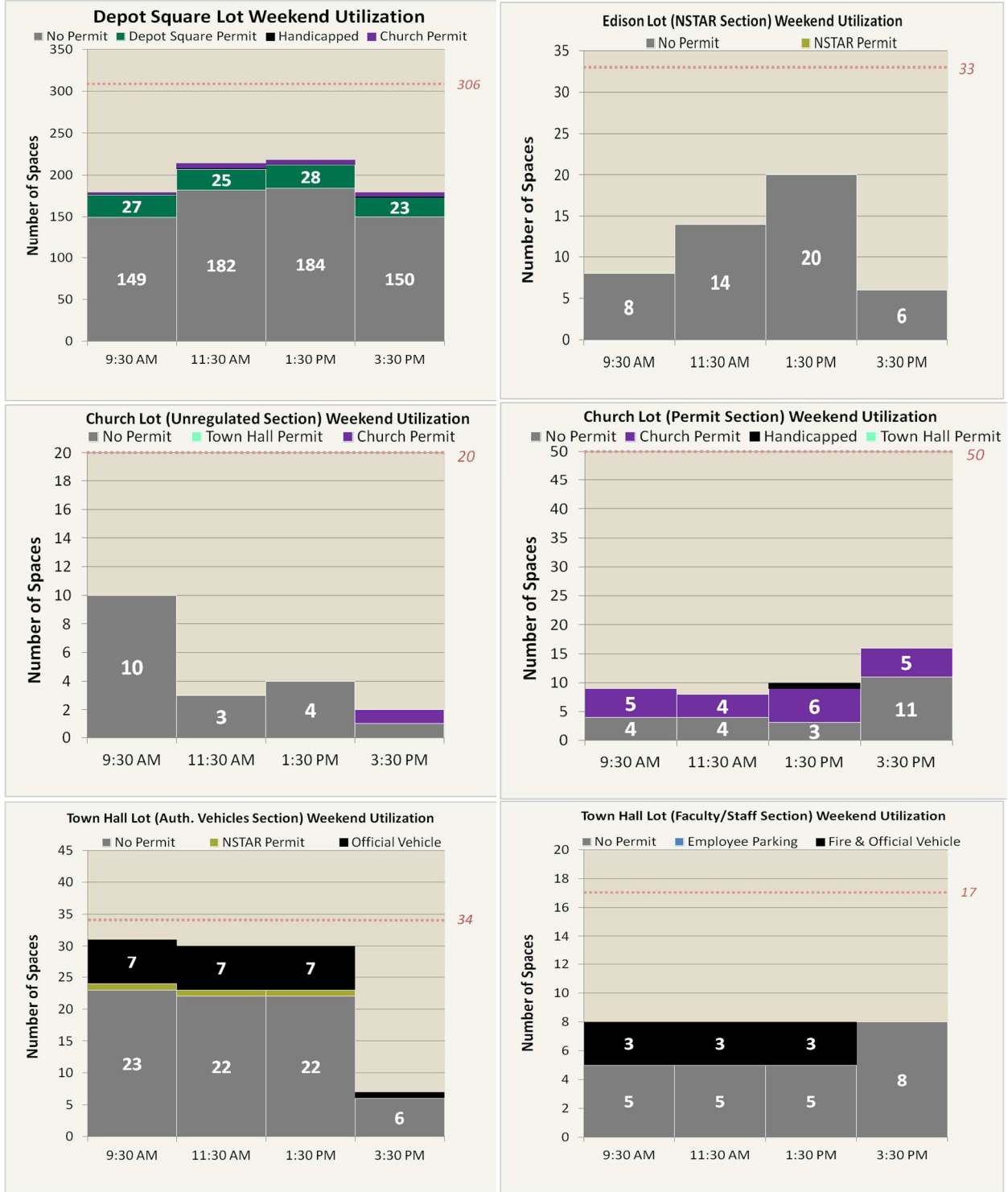
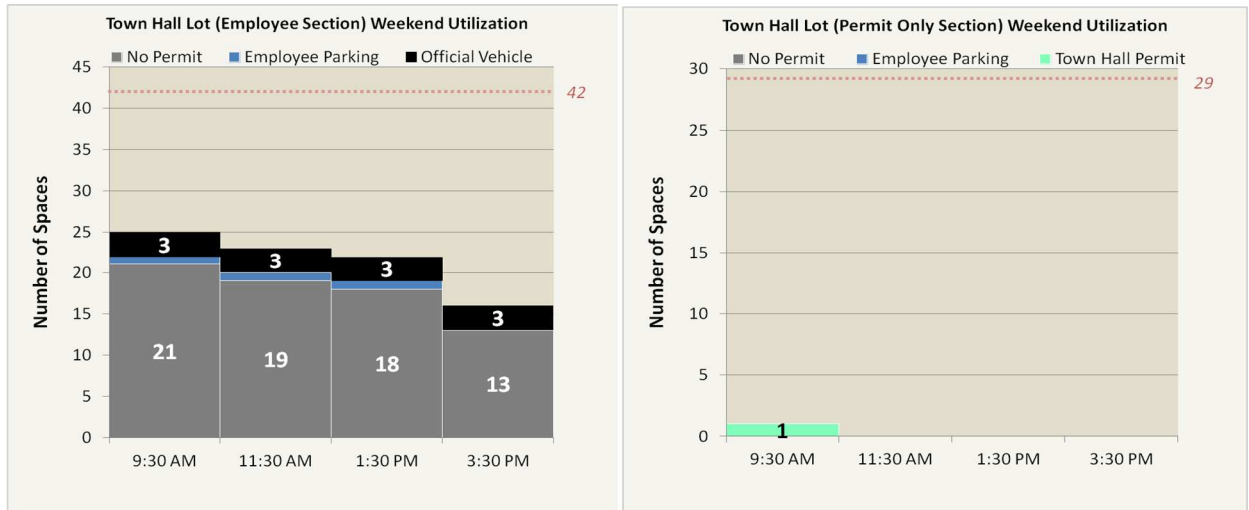


Figure 47 Permit Parking Utilization Analysis: Weekend



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PARKING BEHAVIOR AND PREFERENCES

The team conducted a series of outreach efforts in order to understand the community perspective of parking in Lexington Center. These efforts included interviews with stakeholders such as local employers, business owners, and Town staff; a widely circulated online and print survey that attracted over 550 responses; in addition, public comments have been continually received and reviewed on LexEngage and directly through Town staff; and three public meetings, the first held in December 2013, the second and third held in January.

Figure 48 December Open House Flyer

Lexington Center Parking: Creating an Action Plan for 2014

JOIN US FOR THREE KEY PUBLIC MEETINGS



WE WANT YOUR FEEDBACK! SAVE THE DATES:

December 10, 2013	Open House/ Recent Findings and Approaches	<u>Time:</u> 6:00PM - 9:00PM
January 15, 2014	Initial Proposals for Lexington	<u>Location:</u> Lexington Depot
January 29, 2014	Revised Proposals for the Board of Selectman	

Please take the online parking survey at www.lexingtonma.gov/parking. It takes less than 5 Minutes!

Can't attend the meetings? Please join the conversation by visiting our online public forum "LexEngage" at www.lexengage.com, and look for the topic entitled, "Parking Management."

General community concerns included:

- Difficulty finding parking in the core area
- Customer and visitor confusion and frustration parking in Lexington Center
- Lack of visible parking and wayfinding signage
- Time limits impede customer activities
- Employees compete with customers for parking
- Payment technology is inconvenient
- Pedestrian safety challenges on Mass Ave through some lots
- Customers avoid the Center due to parking issues

The public outreach process was an integral piece of understanding the parking analysis. Talking with community members provided valuable insight not only on what isn't working today, but also opportunities for improvement. Insights into the community's mobility needs, coupled with quantitative

data parking analysis, ultimately help steer the study in a direction that truly addresses user parking challenges unique to Lexington Center.

ONLINE SURVEY

Online survey input from parkers in Lexington Center revealed parking activities, experiences, perceptions, and preferences. Respondents were asked to report about their most recent day in Lexington Center, plus their general perceptions. To collect this data, the Town staff posted an electronic survey on its website and LexEngage, emailed the link to Town listservs, and distributed paper copies to local businesses. The survey effort elicited over 550 responses. This section summarizes the responses and trends in the survey data.

Survey Responses – All

Respondents by User Group

23% of the survey respondents are employees. A majority (58%) of respondents identified themselves as customers, those that come to Lexington Center for social activities and appointments, including shopping and dining. 6% of respondents are residents that live in the Center.

Of all respondents, the majority (86%) report that they drove to the Center, while 1% took transit, 11% walked and 2% biked. Over half of the respondents are frequent visitors to the Center (visit several times a week).

Figure 49 Respondents by User Group

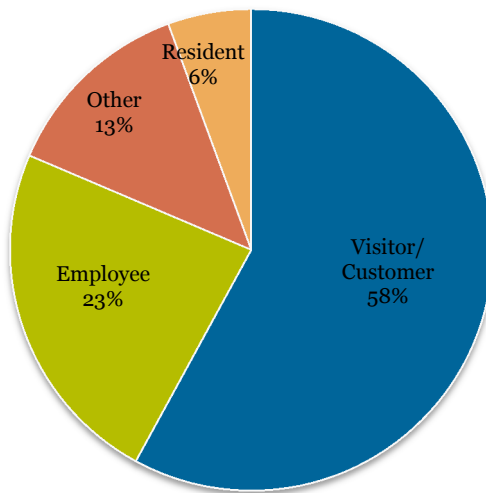
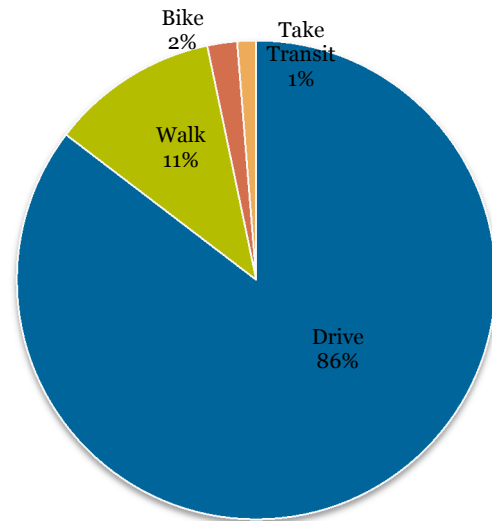


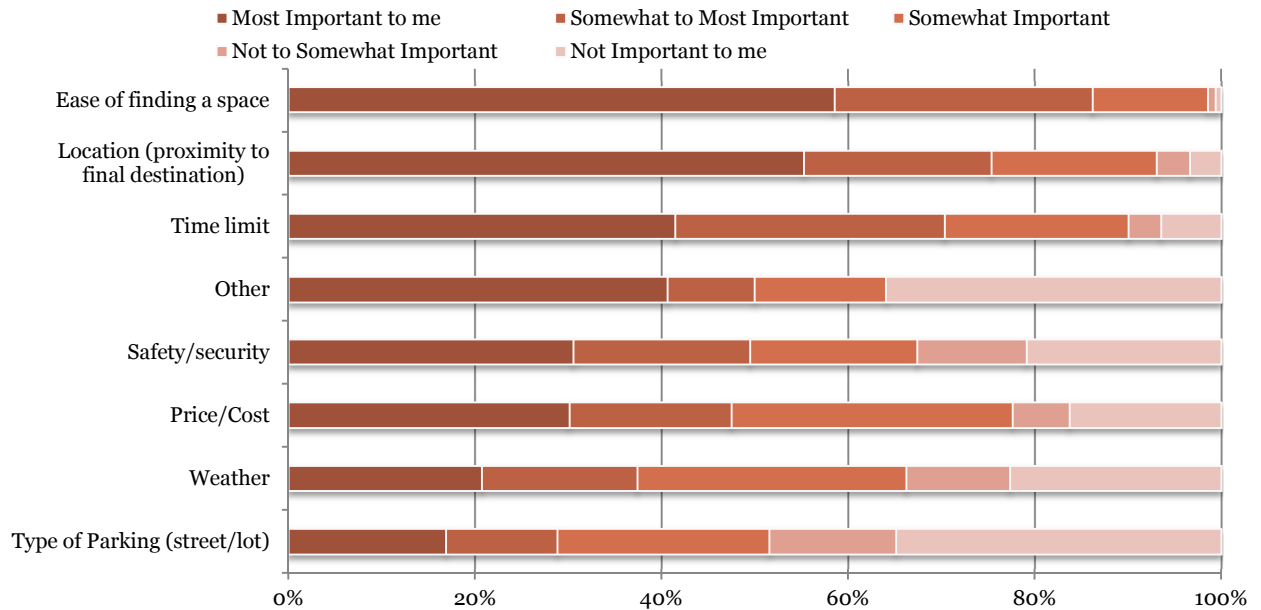
Figure 50 How Did you Get to Lexington Center?



Lexington Center Character - All

The survey asked respondents to rank their priorities when finding a place to park. *Ease of finding a parking space* was most important to most respondents, followed by *Location* (proximity to final destination). *Time limit*, *Safety* and *Security* were both ranked more than “somewhat” important, while *Price of parking*, *Type of parking*, and *Weather* were not as important to respondents. This means that respondents care most about having convenient, safe, and proximate parking areas.

Figure 51 Parking Priorities

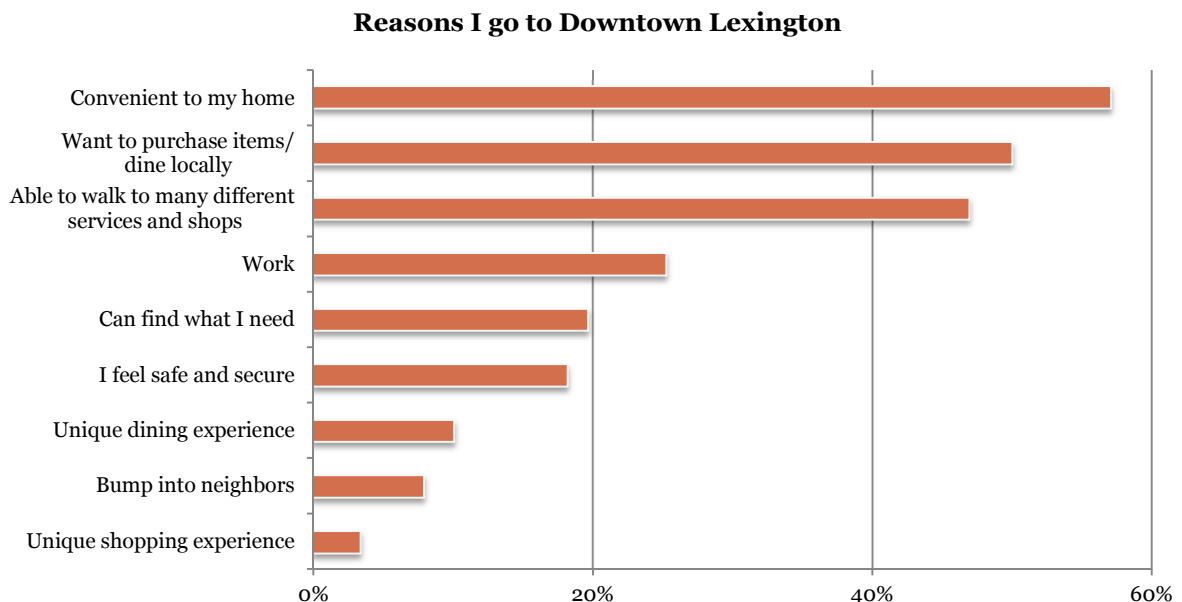


The survey asked respondents about the character of Lexington Center. Respondents could choose up to three reasons why they do and do not go to Lexington Center.

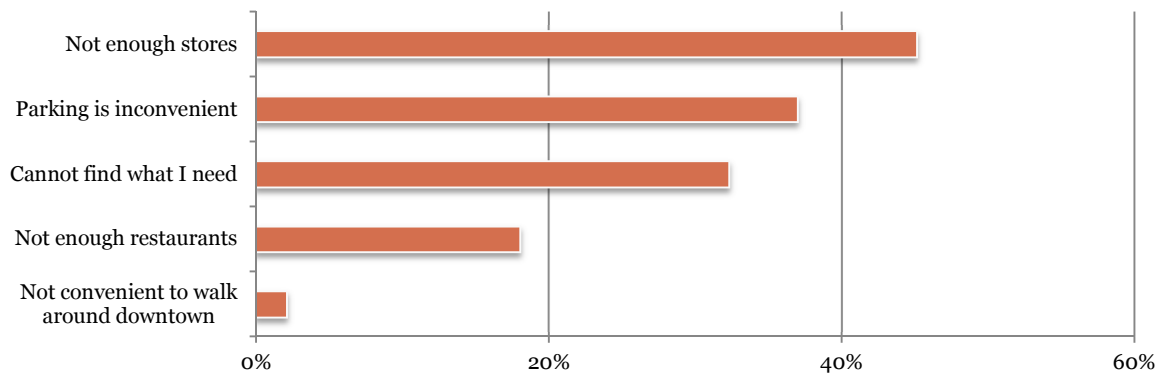
Most respondents report that they come to Lexington Center because it is convenient to their home, they want to purchase items or dine locally, and because of the walking environment.

The number one response of why people do not go to Lexington Center is that there are not enough stores. Inconvenient parking is the second most reported reason why people do not come to the Center more often, with the third most common response that people cannot find what they want in the Center.

Figure 52 Lexington Center Character



Reasons I DO NOT go to Downtown Lexington



Visitor/Customer Profile

Center customers are those running errands, going to appointments, shopping and/or dining. About 60% of the respondents were customers.

Location

Figure 53 How Close to Your Primary Destination Did You Park?

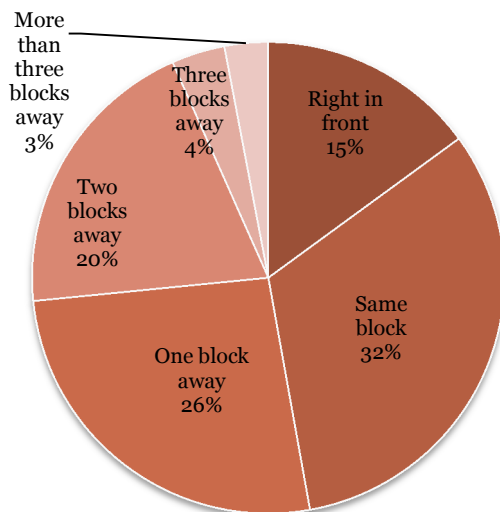
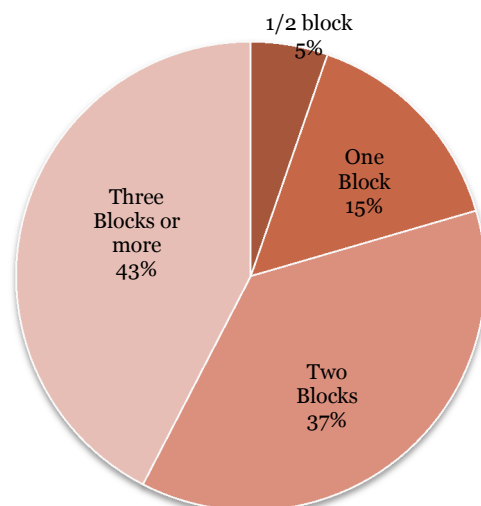


Figure 54 How Far Would You Be Willing to Park from Your Destination, If Parking Was Free?



Three-quarters of visitors or customers park within one block of their destination. This means that although there is a perception that parking in Lexington Center sometimes is difficult, in reality, most customers are able to park relatively close to their destination. However, visitors and customers are also willing to park further away if parking is provided for free.

The survey also shows that 63% of customers park in off-street parking lots, while 37% park on-street. Most park on-street on Massachusetts Avenue, with the Edison Lot and Waltham Lot as the two most popular off-street parking locations.

Figure 55 Customer on-street parking locations

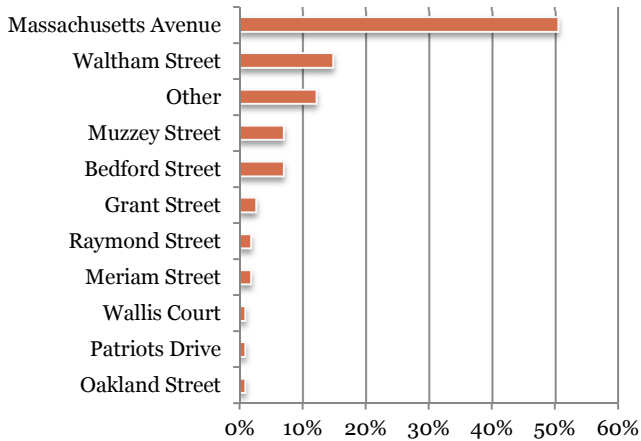
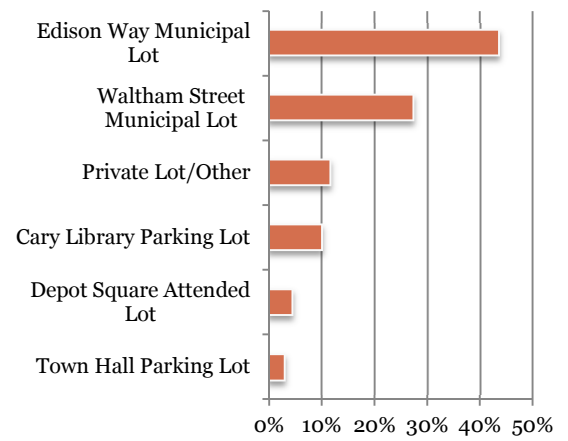


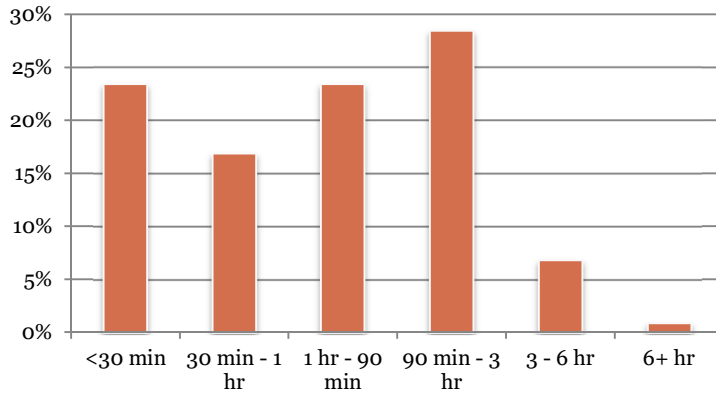
Figure 56 Customer off-street parking locations



Length of Stay

Customers report that they stay in the Center for an average of 1 ½ hours to 3-hours or less than 30-minutes. This indicates that most customers that come to Lexington are either staying for a short time period, with less than 10% staying longer than 3-hours over the course of a day.

Figure 57 How long do you stay in Lexington Center?



Perception of Parking

Two-thirds of visitors reported that they failed to find parking and left. This could have happened just once on a busy day, or more frequently. However, 70% of respondents report that they were able to find a parking space within five minutes or less on the day they filled out the survey. The medium orange bars that represent the “average” time for respondents, which shifts the time searched slightly higher. The lightest orange shows respondents’ estimates of their “worst day” searching for parking, and are almost opposite of their actual reported parking experience. Thus, just a few bad experiences searching for parking can have a drastic impact on how users perceive parking availability.

Respondents also reported that they are more sensitive to time limits rather than price, meaning that many would be more willing to pay to park rather than have to leave or move their car due to a time limit.

Figure 58 Have you ever failed to find parking and just left?

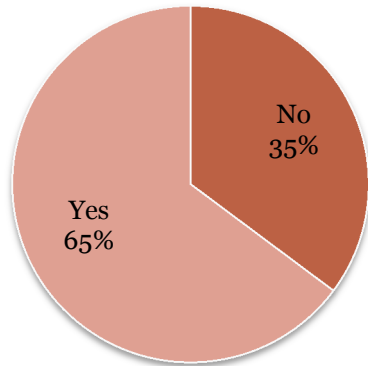


Figure 59 How long did it take you to find a spot:

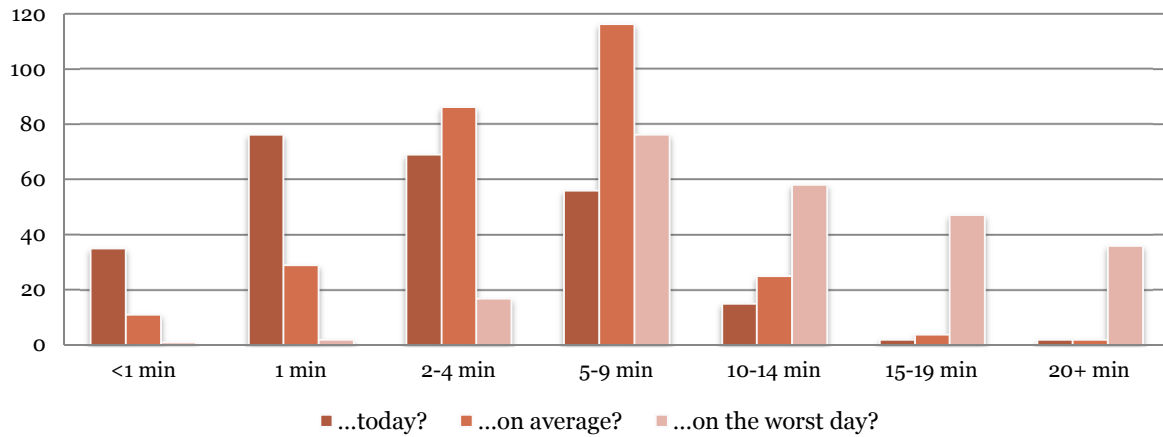


Figure 60 How important is price?

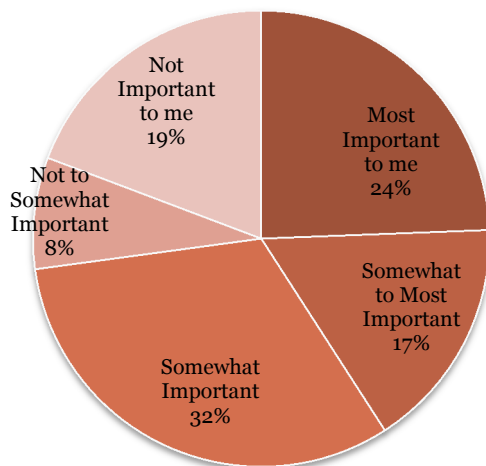
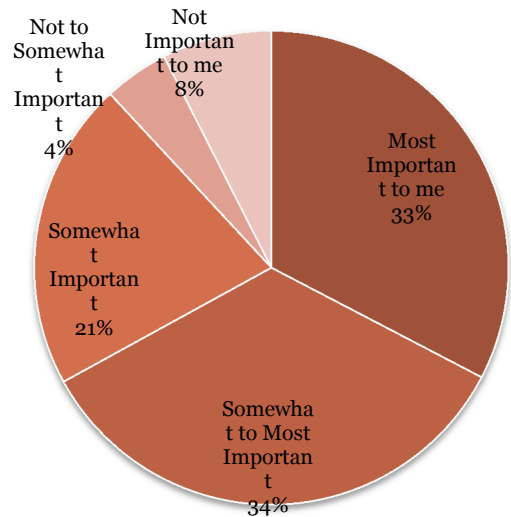


Figure 61 How important are time limits?



Employees

In contrast to customers, most (90%) employee respondents park off-street in private or public lots. Most employees park at were the Depot Lot (44%) and the Town Hall Lot (17%).

Figure 62 Which lot did you park in?

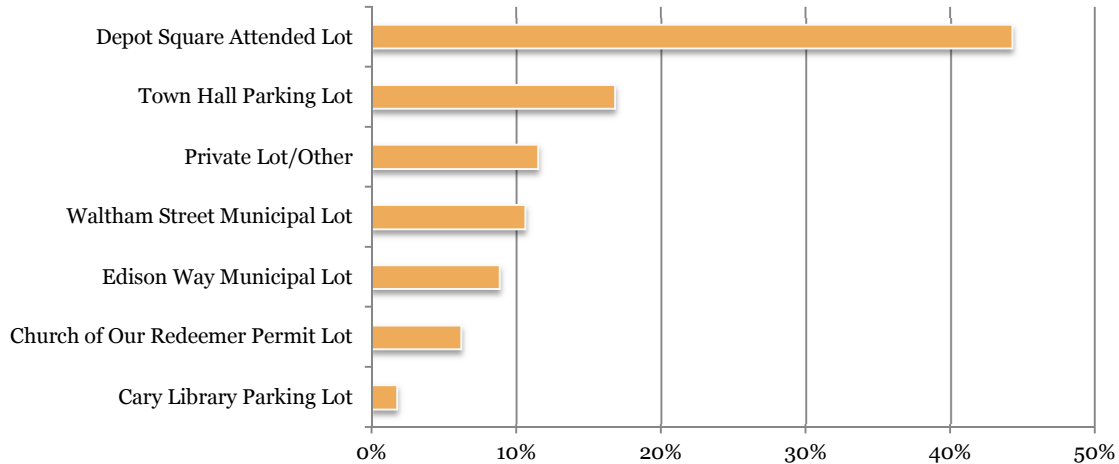


Figure 63 How close to your primary destination did you park?

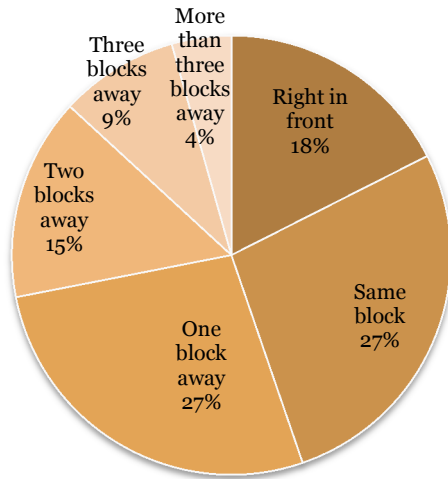
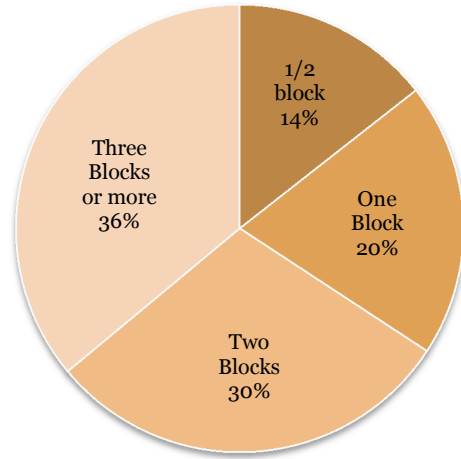


Figure 64 How far would you be willing to park from your destination, if parking was free?



Employees park fairly close to where they work, with 72% parking within one block. Employees also report that they are willing to park further away from work as compared to visitors and customers, even if parking was provided free. For employees, as can be assumed, time limits also matter more to them than parking pricing.

Figure 65 How important is price?

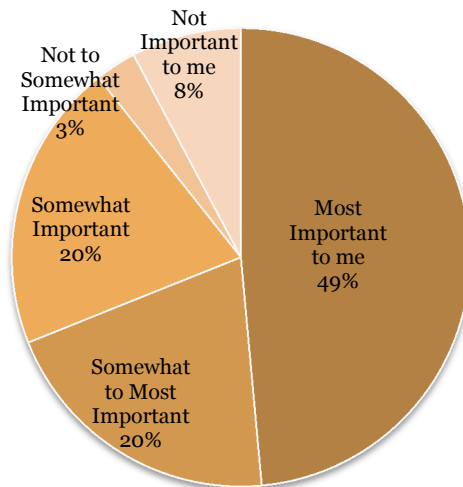
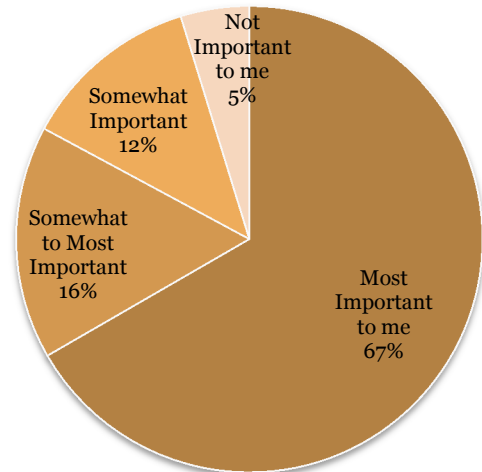


Figure 66 How important are time limits?



Residents

In general, residential participation in the survey was low as compared to other groups, with just 28 total respondents. However, some general trends emerged from the survey.

Results indicate that residents find parking close by: 78% park within one block of their destination, which is likely often home, and 22% parking more than two blocks away. Respondents indicate that they would park slightly further if parking is provided free, with more than half of the residents willing to park two blocks away from their destination.

STAKEHOLDER INTERVIEWS

The review of background information, online surveys, and public meetings were complemented by a series of targeted stakeholder interviews that gathered input on conditions from those most familiar with parking in the Center. Stakeholders were identified by the Town staff and Parking Management Group. Stakeholders included business owners, Center employees, Town committee volunteers, developers and landlords, Town staff, and others.

Interviewers used a general template of questions as the basis for the interviews, but the primary goal was a free flowing exchange about parking and an understanding of specific experiences and perspectives in the Center. Several common themes emerged.

STAKEHOLDERS: KEY FINDINGS

Stakeholders cited a wide range of issues and opportunities related to parking in Lexington Center. A summary of those issues is below, followed by more detailed descriptions of the topics discussed.

- Lack of balance among employee, resident, customer and visitor parking in Lexington Center
- There is a perceived difficulty of finding parking in the core area, both for customers and employees
- Time limits are not friendly and have impeded customer activities
- Regulation and wayfinding signage is confusing in Lexington Center
- Information about public parking, both on- and off-street is lacking
- Payment structure and enforcement technology needs to be improved
- Could better utilize private spaces or parking resources that are currently underutilized through sharing
- Parking requirements are hard to understand and minimums need to be eliminated
- A higher-quality walking and biking environment needed

Balancing Employee, Resident, Customer and Visitor Parking

Stakeholders report that many employees of the offices, restaurants, and other establishments in Lexington Center do not have a designated place to park. Some employees shuffle around on-street time limited streets (taking up valuable customer spaces), others park nearby on a residential side street, and others find a space in a public or private lot. Business owners want to have on-street spaces reserved for patron parking and move employee parking to locations further away.

Perception of a Difficulty of Finding Parking

Stakeholders report that it is sometimes very difficult to find parking spaces close by for their customers. Business owners complain the employee parking spaces have taken the closer location, and patrons have a need for more convenient on-street parking. Some suggested that tour buses need more room and should park in a different area in Lexington Center. Time limits also retrained people finding a long-term parking space.

Unfriendliness of Time Limits

Most stakeholders agree on that on-street time limits are needed for customer use. But, stakeholders report that the 15 minute and two hour on-street time limits are unfriendly and inconvenient to many

customers. If a customer comes to Lexington Center for a meal and to run some errands, two hours is often not enough, and customers shuffle their cars around. For off-street parking, some say that visitors should have more options to stay longer in the Center, as most lots limit stays to two-hours.

Directional Signage to Parking Lots

Regulation and time limit signs on several streets and lots are unclear and sometimes confusing with inconsistent regulations. Wayfinding signage is difficult to see and makes it confusing for parkers to navigate around Lexington Center, especially for visitors and tourists coming from outside of the Town. Some stakeholders don't even know that the Depot Lot was available for public parking. Others report that more lights are needed for nighttime parking.

Payment Structure and Enforcement Technology

Stakeholders report that many don't mind paying the meter, but coin operated meters are outdated and inefficient. Using meter technology that allows for debit and credit cards is needed. Others report that the current enforcement of parking is inconsistent, as demonstrated by the variety of regulations on-street and in the lots. Stakeholders say that a more coordinated management and enforcement system would reduce inefficiencies in the parking system. Enforcement technology should also be improved to more efficiently enforce the time limits and illegal parking.

Shared Parking Opportunities

Some describe particular lots that are underutilized or empty during different periods of the day or week. Stakeholders suggest sharing parking spaces in adjacent private lots when they have complementary schedules. Parking zoning ordinance could have clear guidelines for shared parking agreements.

Eliminating Minimum Parking Requirement

Several stakeholders suggested eliminating the minimum parking requirements in Lexington Center. Given that parking demand is affected by many contextual variables, such as proximity to transit, shared parking, traffic demand management (TDM) programs, the minimum required amount of parking may be reduced in light of these factors and the already available parking in the Center.

Walking and Biking in Lexington

Although the Town has invested in making Lexington Center more walkable and is continuing this effort through a Streetscape study, many stakeholders report that people in the Center have a "walking problem not a parking problem". Many want to park directly or very close to their destination and do not want to walk, or walking a block or two to their destinations does not feel safe. Crossing Massachusetts Avenue is intimidating for many. As for biking, many suggested to have bike parking racks in front of merchants or have designated area for bike parking.

Interviewed Stakeholders

- Susan Bennett
- Mary Jo Bohart
- Richard Canale
- Jimmy Cataldo
- Michelle Cicollo
- Mark Corr
- Peter Enrich
- Manny Ferro
- Michael Greiner
- Annmarie Kelleher
- Peter Kelly
- Pam Lyons
- Michael Martignetti
- Deb Mauger
- Kevin Maguire
- Dawn McKenna
- Trisha Kennealy
- Masha Traber
- Sharon Spaulding
- Peter Levy
- Julie Miller
- John Madeiros
- Depot Parking Attendants

PUBLIC MEETINGS

In addition to the survey and stakeholder interviews, the project team held three public meetings. The first meeting, designed as an open house, had interactive exercises to garner as much feedback as possible. The second and third meetings were designed around presentations that solicited public input. Strategies and ideas were heavily vetted and refined throughout the public meeting process.

Meeting #1: Open House

On December 10, 2013, local residents, business owners, employees, and others were invited to the Lexington Depot to participate in a hands-on "Parking Open House" designed to gather as much qualitative input as possible on parking issues, concerns, and opportunities.

The purpose of the Open House was to introduce the parking study to the general public. The team reviewed general study area boundaries for Lexington Center and discussed the study efforts to date, which included an initial parking inventory, public parking utilization counts, and some preliminary online survey results.

A majority of the meeting time was used to gather feedback from the public, including identification of issues, opportunities, and concerns. The Open House included two primary interactive exercises: parking priorities voting exercise, and parking needs and opportunities map mark-ups

About 40 members of the public participated in this meeting.

Parking Priorities Voting Exercise

Open House participants were invited to "vote" for the parking-related priorities that were of greatest concern to them. Faced with six typical parking issues, participants voted the one option they preferred. The exercise revealed a local desire to implement reverse angle parking, smart meters, and create a dedicated parking fund. Many votes were received for a statement that people wouldn't "mind parking a little further away" if parking is free and guaranteed.

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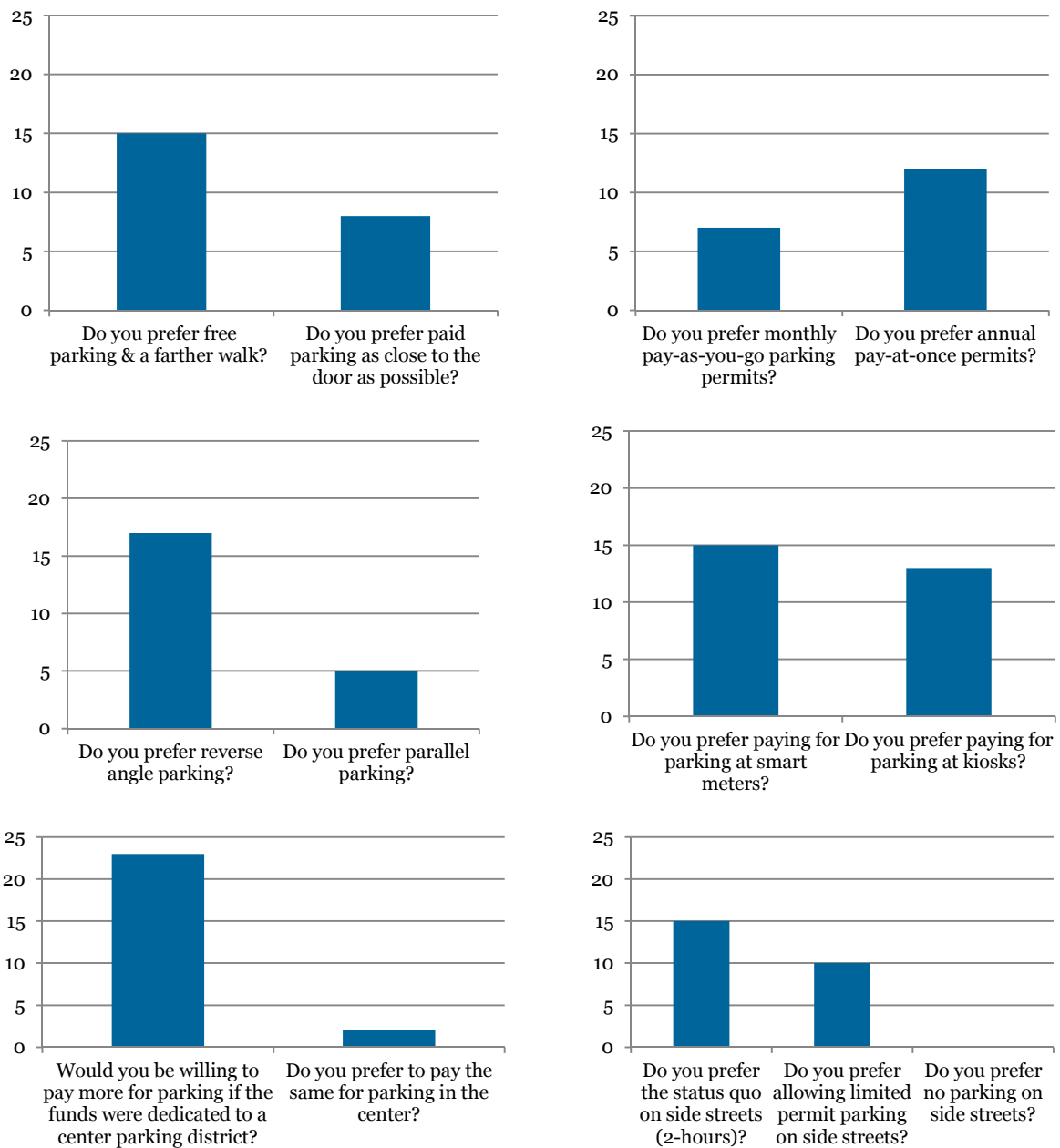
Public meeting participants discuss parking and related transportation and land use issues.



The voting exercise revealed public priorities related to parking in Lexington Center



Figure 67 Voting Exercise Results – Do you prefer...

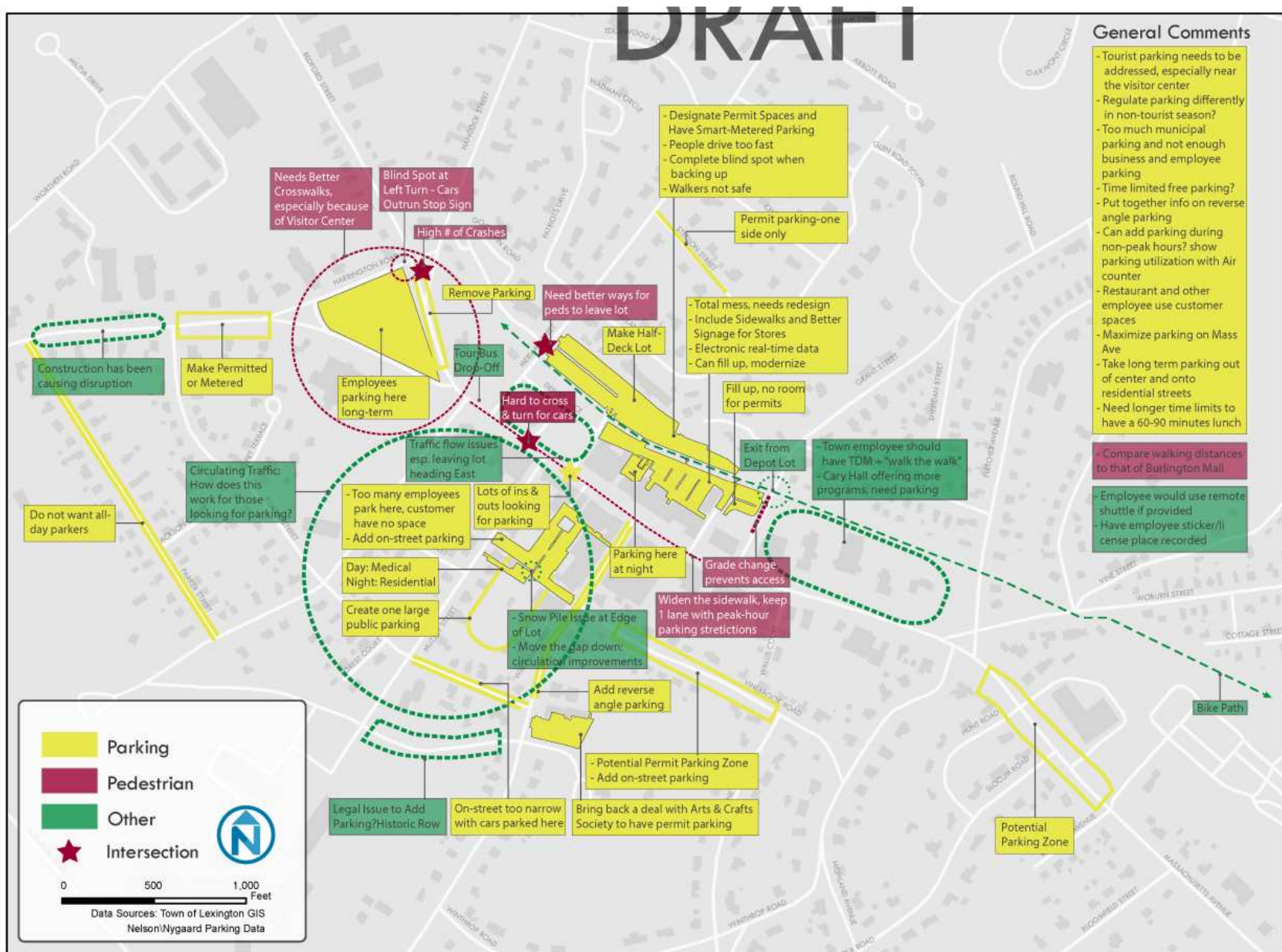


Parking Needs and Opportunities Map

Participants were offered large printed maps of the Lexington Center study area to mark specific areas that need attention or have opportunities for improvement. The map on the following page consolidates the comments from the parking needs and opportunities maps, categorized by topic area.

LEXINGTON CENTER PARKING MANAGEMENT AND IMPLEMENTATION PLAN | FINAL REPORT
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Figure 68 Summary of Public Comments



Meetings #2 and #3: Public Meetings

Another two public meetings were held in January where the consultant team presented initial parking management strategies and recommendations at the second meeting on January 15th, 2014, and more refined strategies based on public input at the third meeting on January 29th, 2014. Generally comments were in tandem with many of the team's recommendations ranging from:

- **Better Management Strategies:** There should be a focus on better managing the Town's existing supply rather than investing in garages within the Center. There may eventually be a need to do so, but at the moment there should be a comprehensive management strategy to address what is currently built (both public and private) and could be added to the public supply.
- **Shared Supply:** Town Hall Lot spaces should be shared between employees as well as public user groups. In addition the Town should work with private land owners to open up private parking supply for general public access and use
- **Adding Supply:** The need to focus on adding more on-street parking to the Town Center supply. This should be carefully examined throughout nearby residential streets and priority should be given to areas that have existing pedestrian infrastructure to support parking additions and surrounding land uses.
- **Safety and Access Improvements:** Enhanced and improved access to and from parking locations in the Center.
- **Focus on Multimodal Integration:** Opportunities to integrate and promote alternative modes of transportation should be part of this larger parking management system to offset parking demand within the Center
- **Handicap Parking:** There should be a focus on the strategic placement and design of handicap parking
- **Technology Improvements:** Opportunities to enhance the customer and user experience in the Town Center include more enhanced parking payment technology, real time information, wayfinding and signage, and an online website presence
- **Curbside regulations:** On-street regulations along Massachusetts Avenue and nearby side streets should be examined closely to maximize on-street parking opportunities. There are possibilities to consolidate loading areas or remove time restrictions on certain regulations to allow for more parking during the peak lunchtime period.
- **Permit System:** A more comprehensive permit system should be created to address the various needs of not only employees, but residents, customers and visitors within the Center. The price for the permit system should reflect the Center's availability goal.

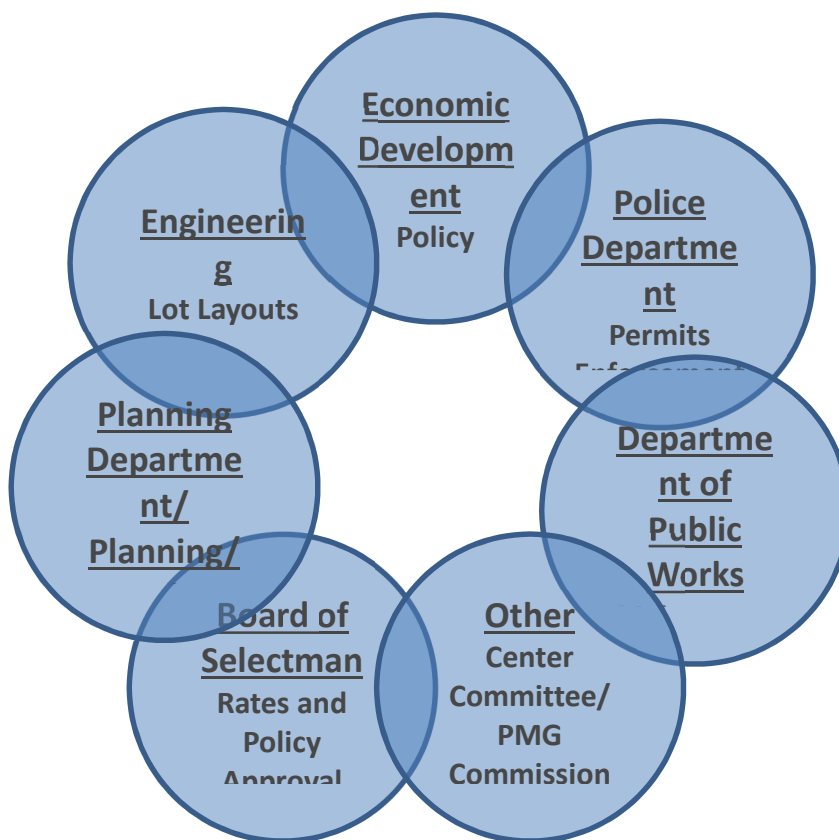


TOWN MANAGEMENT/ ADMINISTRATION

PARKING GOVERNANCE

Today, parking is managed and governed among various departments and decision-making bodies within the Town of Lexington. Parking regulation enforcement, ticketing processing, and collections are handled by a various entities, which often makes coordination difficult among various groups. As shown in Figure 69 below, there are a number of responsibilities that fall under different departments and committees that may overlap with others. Currently, there is no central department that manages or oversees all parking management activity, and often departments do not communicate frequently about parking initiatives or improvements. This lack of a centralized management body may make the parking management system confusing for the average Town person looking inquire about a parking or even renew a permit.

Figure 69 Existing Parking Governance Structure



PARKING REVENUE

Parking revenue for the Town of Lexington is generated through meter, permit, as well as ticket and citation fees. Since 2011, the Town has generated more than \$300,000 in parking revenue,

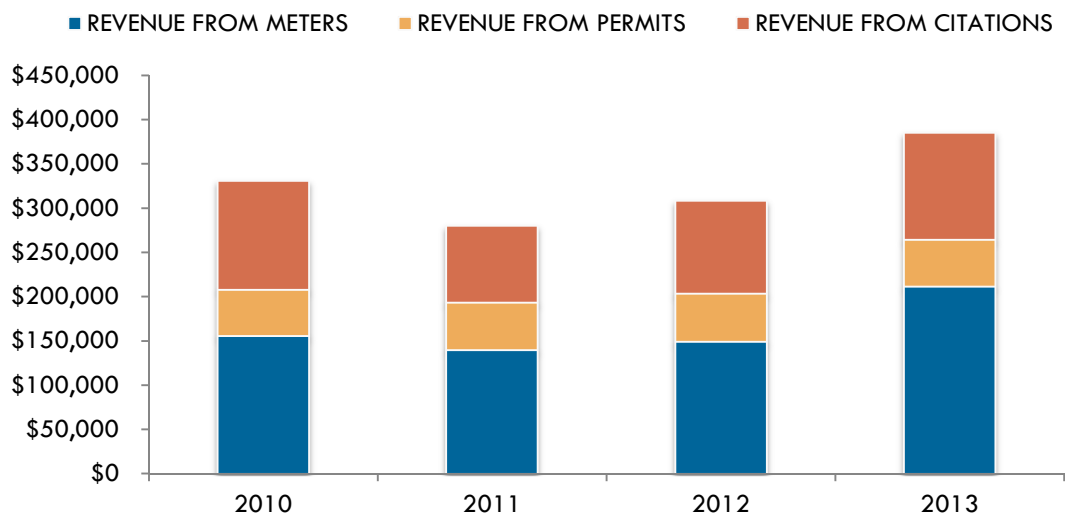
and in 2013, this amount has increased well over \$380,000. In 2013, 55% of the parking revenue was from meters; 14% was from permit sales; and 31% was from parking citations.

Figure 70 Parking Revenue

Year	Revenue From Meters	Revenue From Permits	Revenue From Citations	Total
2010	\$155,472	\$52,299	\$122,965	\$330,736
2011	\$140,192	\$53,096	\$87,106	\$280,394
2012	\$149,263	\$54,190	\$104,708	\$308,161
2013	\$211,661	\$52,542	\$120,898	\$385,101

Police Department, Town of Lexington

Figure 71 Town of Lexington Parking Revenue 2010-2013



ZONING ANALYSIS

The Town of Lexington's Zoning Bylaw (amended March 20, 2013), outlines the zoning code for the Town under the auspice of governing "the use of land; the size, height, bulk, location and use of structures, buildings, and signs."

Parking Provision

The Town of Lexington's Off-Street Parking Requirements, with a comparison to the Institute to Transportation Engineers' Parking Generation Manual (4th Edition), is summarized below:

Figure 72 Comparison of Parking Requirements based off Lexington's Zoning Code

Principal Use as Defined by Lexington	Lexington Regulation	ITE Peak Parking Demand Rates	Lexington vs. ITE
Dwelling unit in a one-family dwelling	2 spaces per dwelling unit.	1.83 spaces per dwelling unit.	Above.
Dwelling unit, not in a one-family dwelling	1.5 spaces per dwelling unit for units with 2 or fewer bedrooms, 2 spaces per dwelling unit for units with more than 2 bedrooms.	Rental townhouse: 1.62 spaces per dwelling unit	Above and Below – Depending on the number of bedrooms.
Publicly assisted housing for the elderly	0.5 spaces per dwelling unit.	0.59 spaces per dwelling unit for senior adult housing.	Below.
Hotel and motel	1 space per guest room.	1.2 spaces per occupied room at a hotel with accessory uses. .66 spaces per occupied room at a business hotel. .71 spaces per occupied room at a motel.	Above and Below – Depending on the type of lodging.
Schools	2 spaces per classroom.	0.17 spaces per student at elementary. 0.09 spaces per student at middle school. 0.23 spaces per student at high school (suburban).	Different units are considered.
College, technical school	As needed.	Between 0.18 and 0.33 spaces per school population.	Different units may be considered.
Day Care Center	1 space per 500 square feet.	3.16 spaces per 1,000 square feet of gross floor area.	Below.
Church, temple auditorium, lodge, community center	1 space per 6 seats in largest assembly area.	0.2 spaces per seat for churches.	Below.

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Principal Use as Defined by Lexington	Lexington Regulation	ITE Peak Parking Demand Rates	Lexington vs. ITE
Assisted Living / Nursing Home	0.4 spaces per living unit.	0.35 spaces per bed.	Above and Below – Depending on whether units are shared.
Retail Store or personal service shop	1 space per 250 square feet; 1 space per 325 square feet (in the CB zoning district). For street-level floors, 1 space per 500 square feet; 1 space per 600 square feet (CB). For cellars, 1 space per 300 square feet; 1 space per 400 square feet (CB).	1.2 to 4 spaces per 1,000 square feet (depending on type).	Approximately Equal or Below.
Restaurant	The greater of 1 space per 3 seats or 150 square feet; The greater of 1 space per 5 seats or 200 square feet (CB).	Approximately 0.5 spaces per seat (or between 12.40 to 16.41 spaces per 1,000 square feet) at quality restaurants, high-turnover restaurants, and fast-food restaurants with a drive-through window.	Below.
Commercial/office	1 space per 250 square feet; 1 space per 333 square feet (CB).	2.84 spaces per 1,000 square feet.	Above.
Bank	As needed, usually 1 per employee.	4 spaces per 1,000 square feet.	Different units may be considered.
Library, art gallery, museum and other non-recreational public facilities	1 space per 600 square feet.	2.61 spaces per 1,000 square feet for libraries. 1.32 spaces per 1,000 square feet for museums.	Above and Below – Depending on use and size.
Indoor athletic and exercise facilities, weight reduction salon	6 spaces per 1,000 square feet	5.27 spaces per 1,000 square feet.	Above.
Theater	1 space per 6 seats.	.36 spaces per seat for live theaters. .26 spaces per seat for “matinee” movie theaters. .15 spaces per seat for multiplex movie theaters.	Above and Below – Depending on type of theater.

Principal Use as Defined by Lexington	Lexington Regulation	ITE Peak Parking Demand Rates	Lexington vs. ITE
Commercial amusements	1 per employee plus 1 per alley or machine; 1 per employee plus 2 per alley or machine (in the CB District).	5.02 spaces per bowling alley lane.	Above and Below – Depending on the number of employees.
Warehouse and storage yard	1 space per 1,000 square feet.	.51 spaces per 1,000 square feet.	Above.
R&D and Light manufacturing	1 space per 500 square feet.	0.75 spaces per 1,000 square feet.	Above.
Manufacturing, packaging, processing, and testing	1 space per 500 square feet.	1.02 spaces per 1,000 square feet.	Above.

Additional notes:

- Calculated fractions of spaces per unit, beds, etc, round up from ½ or higher only.
- 80% of gross floor area may be used “to simplify the determination of net floor area.”
- “As needed” requires applicants to estimate parking needs, and the permitting authority is expected to verify the number’s adequacy or “order that additional spaces or bays be provided.”

Town of Lexington, Section 135-5.1

Preferential Parking for Shared Vehicles

The Town of Lexington, in order “to encourage the use of high-occupancy vehicles,” has required that all office, manufacturing, research or laboratory uses of over 50,000 square feet of gross floor area to adhere to the following additional minimum standards:

- One carpool/vanpool space per 150 parking spaces.
- All carpool/vanpool spaces must be signed, striped, and located near the building’s primary entrance-- but without the displacement of handicapped parking.

All “rideshare parking spaces” are allowed to be incorporated into the original total of parking spaces dictated by parking minimums. In other words, motor vehicle spaces can be converted for rideshare spaces.

There appears to not be any distinction made between “rideshare” and “carpools,” while no distinction is made for “carshare” services.

Parking Design

Off-street parking spaces are subject to the following design standards:

Figure 73 Parking Design Standards

Angle of Parking	Parking Space Width		Parking Space Depth		Maneuvering Aisle Width		Unit Parking Depth	
	Standard	Compact	Standard	Compact	Standard	Compact	Standard	Compact
All								
61° - 90°	9'	8.5'	19'	15'	22'	20'	60'	50'
46° - 60°	9'	8.5'	19'	15'	16'	15'	56'	48'
45°	9'	8.5'	19'	15'	14'	13'	53'	47'
Parallel	8'	8'	22'	18'	12'	12'	N/A	N/A

Additional Notes:

- One-way driveways shall be a minimum of 8 feet,
- Two-way driveways shall be between 18 and 30 feet, and;
- Compact spaces shall not exceed 33% of the total parking stock in lots with 20 or more spaces.

Town of Lexington, Section 135-5.1.13

Dimensional Requirements

For all one-family and two-family dwellings, all driveways and parking spaces shall have a **setback of 5 feet from all side and rear lots.**

For any other uses, all paved parking spaces, driveways and maneuvering aisles shall have the following setbacks:

Figure 74 Parking Dimensional Requirements

District	Residential District Line	Street Line	All Other Lot Lines	Principal Building Wall
RS, RO, RT	N/A	25'	5'	5'
RD	N/A	25'	8'	5'
CRO, CLO	50'	50'	10'	5'
CM	50'	25'	N/A	5'
CRS, CS, CB, CN	20'	10'	N/A	5'

Curb Cuts

The number of driveways for access and egress to off-street parking lots are limited to **two per street line.** ²

Bicycle Parking

A minimum of 2 bicycle parking spaces is required for all office, manufacturing, research or laboratory uses. For every increment of 20 motor vehicle parking spaces above 40 vehicle spaces, an additional bicycle parking space shall be required for the aforementioned uses.

Half of the spaces shall be long-term spaces that are protected from vandalism and the elements, while the other half shall be short-term spaces that are conspicuously placed by the entrance.

² Town of Lexington. Section 135-5.1.10

Transportation Demand Management Measurements

Certain developments may be required by the *special permit granting authority* (SPGA) to incorporate a variety of **Trip Reduction Requirements** as a condition of a special permit (with or without a site plan review) approval. The listed actions may include:

- Public transportation passes for employees
- The use of carpools and vanpools,
- Incorporating flex-time, staggered work hours, and other scheduling tactics to reduce traffic at peak traffic hours,
- Preferential parking locations for non-single-occupant automobiles,
- Restriction off-street parking access/egress during peak traffic hours; or,
- Incorporating locker/shower facilities to encourage bicycle commuting.³

The Town Of Lexington is permitted to create a **Transportation Management Overlay (TMO) District**, to “allow greater opportunity for facilitating effective multi-modal transportation networks that increase the quality of life” through the aforementioned mitigation measures.⁴ The district must be consistent with the principals of *multimodal consideration* (the safety and mobility of all users), *context sensitive design* (attention to scenic, aesthetic, historic and environmental resources) and a *clear process* of planning and implementation.

Traditional to “overlay districts,” the TMO District “shall not supersede other zoning districts,” but rather be “superimposed over these other zoning districts.”

For each TMO District, the town’s Planning Board, in consultation with the Board of Selectmen and a public meeting, shall adopt a specific transportation plan containing all of the following elements within the specified area:

- Assessment of future development impacts;
- Analysis of existing capital improvement plans and adopted facilities plans;
- Cost projects for transportation infrastructure improvements required to address future developments;
- Analysis of other anticipated funding sources;
- “Required transportation mitigation fees in accordance with a methodology determined pursuant to this study;”
- Off-street parking and loading requirements;
- Parking and TDM measures that will reduce the number of vehicle trips;
- An implementation program and schedule for all “*municipal* actions necessary to achieve the objectives of the plan; and,”
- Plans to increase voluntary participation in TDM programs.

³ Town of Lexington, Section 135-5.5.8

⁴ Town of Lexington, Section 135-7.2.1

The plan “shall be updated periodically to reflect actual development activity, actual costs of infrastructure improvements completed or underway, plan changes, or amendments to the zoning bylaws.”⁵

Any applicant proceeding within a TMO District must be pay a **Transportation Mitigation Fee** (assessed in rough proportionality to development impacts as specified in the TMO District plan) and submit a **Parking and Transportation Demand Management Plan**. Compliance with this plan may be enforced per Section 135-9.1 by the Town of Lexington *Building Commissioner*.⁶

The only TMO District currently in effect surrounds the Hartwell Avenue corridor, to the west of Route 128 and Lexington Center.⁷

Nonconforming Parking

Any existing off-street parking as of the bylaw’s effective date “may not be reduced in number, or changed in location or design contrary to the requirements” established by the Zoning Code.⁸

Change of Use Rules

A use of an existing lot that lacks “sufficient parking or loading” may changed in use with a different parking requirement “only if the net increase in the number of required parking spaces or loading bays is provided in conformity with section 5.1.”⁹

“Lawfully existing” parking spaces that are in compliance with design standards, but are “no longer required for those uses” are permitted to be “transferred to a new, changes, or expanded use in an existing structure, even if they do not conform to [design] requirements of Section 5.1.13 as to setbacks, snow storage, access for a parking lot or landscaping.”¹⁰

Credit is granted for existing parking spaces entirely within a given lot upon the submission of “an off-street parking and loading plan” that is “certified by a registered land surveyor or professional engineer.”¹¹

⁵ Town of Lexington, Section 135-7.2.4

⁶ Town of Lexington, Section 135-7.2.5 & 135-7.2.6

⁷ Town of Lexington, 2011 Zoning Map

⁸ Town of Lexington, Section 135-8.7.1

⁹ Town of Lexington, Section 135-8.7.2

¹⁰ Town of Lexington, Section 135-8.7.3

¹¹ Town of Lexington, Section 135-8.7.6

RECOMMENDATIONS

Through the course of the Parking Implementation Plan and previous planning efforts, the Town of Lexington has continually expressed the need to develop a comprehensive understanding of parking to better support the changing needs of those who live, work, and visit its historic Town Center. What this Implementation Plan has helped the community uncover is that parking issues are rarely about just parking itself, but integrally tied with many other contributing factors that make Lexington a vibrant, successful, and attractive place for residents and visitors.

The recommendations herein are intended to guide the Town's parking management system. The specific recommendations drawn from this study rely on broader goals and expectations developed through this ongoing and extensive planning and outreach effort. All issues, challenges, opportunities and solutions were compiled by the consultant team, but emerged from Town Center observations, stakeholder discussions, and most importantly public participants during various public meeting sessions. The guiding principles behind the integrated recommendations stem not only from this current effort, but also from previous and ongoing work completed by the Town, the Parking Management Group, and many others.

Study Goals are to:

- 1) Manage Parking More **Efficiently**
- 2) Increase Parking **Availability**
- 3) Accommodate **Short and Long Term Parking**
- 4) **Simplify** Parking System
- 5) **Support** Economic Development Goals
- 6) **Integrate Solutions** with Town Center Environment

The Implementation Plan's recommendations are interrelated. They were developed in tandem and should be considered co-dependent with one another. The recommendations present opportunities to increase and share the existing parking resources and assets in Lexington Center. Overall recommendations are supported by related strategies, such as pedestrian connections and improvements, which directly affects the access and availability of parking.

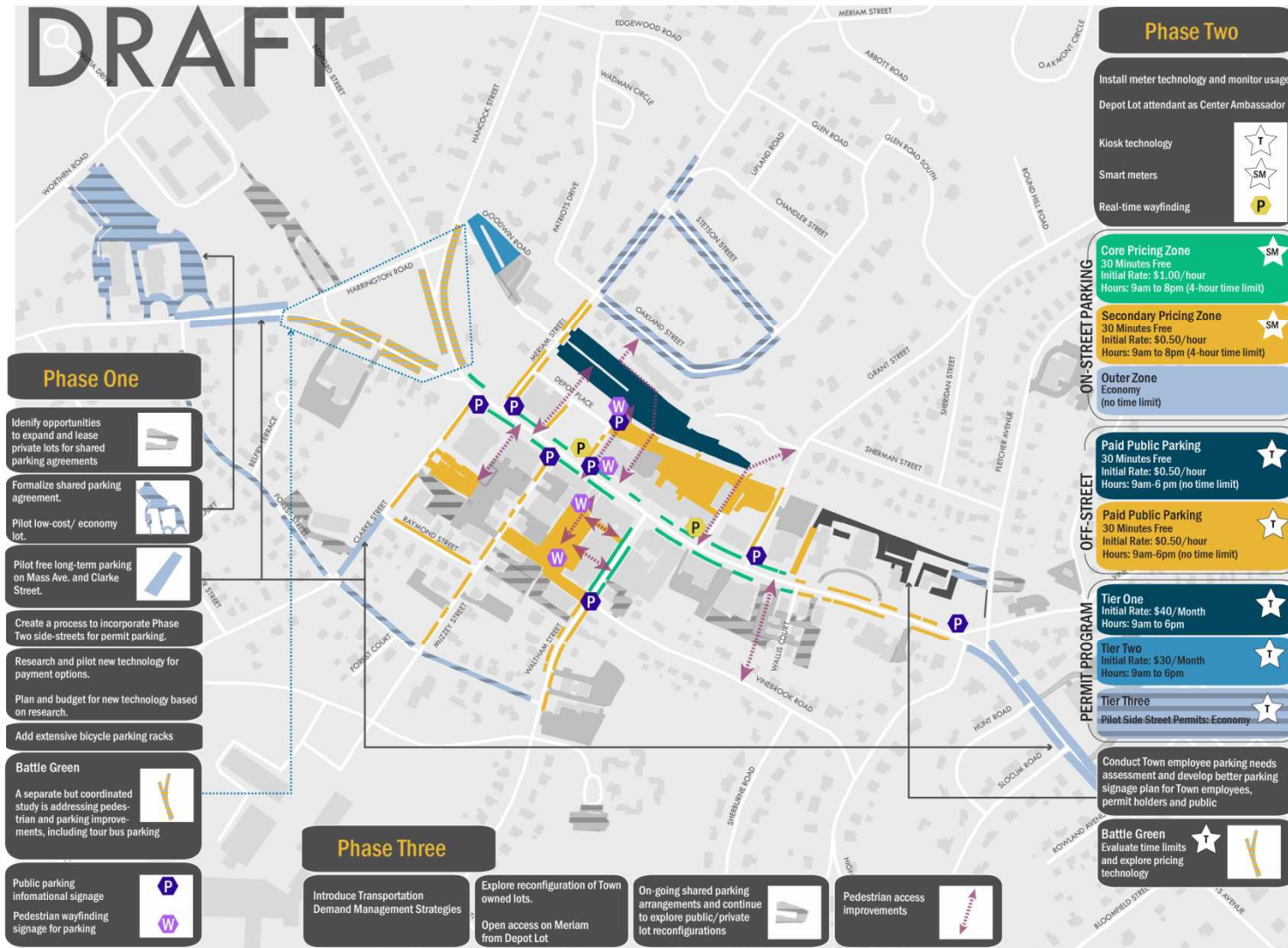
Recommendations are categorized into the following general groupings:

- 1) Create Available Parking
- 2) Improve Administration
- 3) Invest in the Center

The map on the following pages summarizes the recommendations.

LEXINGTON CENTER PARKING MANAGEMENT AND IMPLEMENTATION PLAN | FINAL REPORT Town of Lexington

Figure 75 Lexington Center Parking Recommendations



CREATE AVAILABLE PARKING

In Lexington Center, parking should be managed in a manner that ensures there is both perceived and actual parking availability. The Center's highest parking demand is primarily concentrated during the lunchtime peak hour. During this time, finding a parking space on Massachusetts Avenue is almost impossible, and finding available parking in nearby public lots is just as hard.

The inability to find parking along Massachusetts Avenue during this lunchtime crunch is not just due to a surge of lunchgoers, but because everyone is fighting for the same most convenient spaces. With current pricing on-street and off-street at the same rates, there is little incentive to look for a space anywhere else but Massachusetts Ave. During this lunchtime peak, core spaces are nearly full, yet there is still an ample, available parking supply within one or two blocks of the heart of the Center. However, a majority of spaces are located off-street and are privately owned, restricted to the general public.

Introducing this privately owned parking supply into expanded or public use is a critical opportunity for all Lexington Center users. The Town is already engaged in these types of agreements with NSTAR and the Church of the Redeemer. Better utilization of existing spare capacity will unlock a greater supply of off-street parking for public use. When combined with more effectively managing valuable curbside parking, Lexington can expect to significantly increase overall parking availability. As this type of approach is rolled out, the first step is to adopt a parking availability goal to help regularly adjust the program to ensure availability.

The following management strategies are recommended to create parking availability:

- **Availability Goal**, which would allow Town staff to adjust parking rates and regulations to meet an adopted goal
- **Demand-Based Pricing**, including on and off-street management changes such as regulations, pricing, time limits, and hours of operations, and pricing zones
- **Employee Permit Program**, which would readjust the existing permit structure and permit parking locations
- **Technology**, by introducing new, user-friendly parking technology in existing and new locations for on- and off-street spaces
- **Enforcement**, with adoption of upgraded enforcement practices to support the overall system

Demand-Based Pricing

Availability Goals

The industry standards for "optimal" availability levels are 15% for on-street spaces and 10% for off-street. At these targets, parking is well used, but availability (and the perception of it) remains, so that customers can find parking in the most convenient and desirable areas. The Town should adopt both of these measures as official parking-management targets. This means that Town staff would have the authority to periodically monitor and adjust parking rates and regulations to meet these availability goals. The rates set forth in this report are suggested rates to start with; these will need to be periodically adjusted over time. See the **Ongoing Management** section for more information.

On-Street Management

Existing parking utilization patterns indicate clear boundaries of high and low demand for on-street spaces in the Center. Parking along Massachusetts Avenue, from Clarke Street to Wallis Court, are consistently 90% full or higher, while adjacent blocks are, on average, 70% full. The regulations and pricing should be changed to be reflective of the demand of these areas.

On-street, parking should be managed using tiered pricing: the highest priced parking should be on the blocks with greatest demand, lower pricing on blocks with modest demand, and free in the areas of little to no demand to incentivize the most efficient utilization of the existing parking resources. This helps to achieve parking availability goals in the most convenient “front door” curb parking spaces. The span per day of on-street parking should continue to be priced until 8pm, as this incentivizes long-term evening parkers (e.g. restaurant employees) to park off-street.

The Implementation Plan recommends that on-street demand-based pricing should be initially implemented using the following characteristics in Figure 76.

Figure 76 On-Street Parking Management Summary

Location	Price	Time Limit	# of Spaces	Free Period	Days of Week	Span per Day
Today						
Mass Ave + adjacent streets	\$0.25/hour	15 min, 30 min, 2 hours, 4 hours	209	None	Mon-Sat	9am - 8pm
Total			209			
Proposed						
Core	\$1.00/hour	4-hours	83	30 minutes	Mon-Sat	9am - 8pm
Secondary	\$0.50/hour	4-hours	149	30 minutes	Mon-Sat	9am - 8pm
Outer	Free	Unlimited	94	Unlimited	Mon-Sat	24 hours
Total			326			

This table presents the initial on-street management program; this program will need to be evaluated, monitored, and refined over time. See the Ongoing Management section for more detail.

The Center can be divided into three zones: the “core”, which focuses around the heart of the Center near the shops and destinations along Mass Ave and the top of Waltham Street; the secondary zone, which includes the area near Town Hall and most adjacent streets; and the outer areas, which are a couple blocks away from the core. Pricing zones can and should be refined through monitoring and observations, including reducing or extending the boundaries of the higher priced core, combining zones into a single zone, etc.

Time Limits

Most of the Center is managed by two-hour time limits, which restricts Center patron stays. As the number of gathering spaces increases, a variety of retail opens, and tourist attractions increase in popularity, customer and visitor length of stays are increasing. Good economic

development policy indicates that inviting - and allowing - patrons to stay for a longer time period - here, four hours instead of two - will have a positive impact on the local economy.

Initial Free Period

The free period of 30 minutes is intended to serve as a customer-convenience policy, for those customers that are only staying for a short period (to drop a book at the library, pay a bill, pick up dry cleaning). This allows for short-trip patrons to not pay the meter, and come and go quickly. An initial free period should be offered both on- and off-street.

Additional Adjustments

Loading Zones: The Town should also monitor and evaluate its existing on-street loading zones and consider limiting loading hours for specific daytime use only (e.g. 6am - 2pm). During off-peak loading times, the signing should allow on-street parking.

Battle Green: Parking design and access around the Battle Green is being evaluated through a separate (but coordinated) study. The surrounding on-street parking should be evaluated by piloting eliminating time limits and eventual pricing technology.

Off-Street Management

Today's management of public off-street assets does not reward parkers for parking further from their destination in off-street locations. Rather, they continue to seek the front door spaces closest to their destination. In part, this occurs because the existing management of off-street pricing, time limits, and hours of operation are, in most off-street locations, identical to on-street parking. The consistent high utilization of many prime, metered assets along Mass Ave suggests that patrons would be willing to pay more, and the consistent availability of spaces in off-street lots could accommodate those that are not.

A substantial change in today's program is to eliminate the time limits in the public lots to allow for and encourage long term parking. Today's time limits, designed as a deterrent to employees, create a two hour maximum for customers, limiting them to short stays. Price alone should regulate how long people stay. If a customer would like to stay in town to enjoy all that Lexington Center has to offer - they should be encouraged to stay. They should be able to, and utilize off-street lots to spend as little or as much time as they would like.

Figure 77 Off-Street Parking Management Summary

Location	Price	Time Limit	Free Period	Days of Week	Span per Day
Today					
All Public Lots (except Town Hall)	\$0.25/hour	2 hours (Depot Lot unlimited)	None	Mon-Sat	9am - 8pm
Town Hall Lot	Free to Town employees Some 30 min and 2-hour meter spaces	Unlimited	None	Mon-Fri	Open to all after 7pm and on weekends
Proposed					
All Public Lots (except Town Hall)	\$0.50/hour	Unlimited	30 minutes	Mon-Sat	9am - 6pm
Outer	Free or Free Permit	Unlimited	Unlimited	All	24 hours

This table presents the initial on-street management program; this program will need to be evaluated, monitored, and refined over time. See the Ongoing Management section for more detail.

Off-street management practices should work in tandem and complement the proposed on-street pricing and management recommendations. Higher prices on-street, should be coupled with lower prices off-street. This pricing approach should ensure and enhance the availability of the most desirable spaces for those who are willing to pay, while providing options and alternatives for those who are more price sensitive. Customers, employees or visitors can then choose to park in the place that best fits their needs.

Existing utilization patterns of off-street public assets indicate that pricing should be slightly lower and comparable to the secondary on-street pricing zones. All public off-street parking areas including the Cary Library Lot, Waltham Lot, the Edison Lot, and the Depot Lot should be priced initially at \$0.50 per hour. The leased Church of our Redeemer Lot should continue to be used as overflow parking.

The hours of operation for each of these lots should be from 9am to 6pm (as compared to the 9am to 8pm on-street). This helps to incentivize long-term evening parkers to park off-street.

In the short-term, the Town Hall Lot, the lot at St. Brigid's, and other leased lots should be offered as economy or discounted parking. These arrangements and regulations will need to be evaluated one-by-one.

Depot Lot

The Depot Lot is the largest resource of parking supply in the Center. Today, the lot functions as an employee permit area, plus an hourly and daily transient parking area. This Lot often reaches capacity around mid-day, as it is the only area in town where there are no time limits. The high demand in the Depot Lot is expected to disperse among the newly regulated off-street areas and new areas being introduced into the public parking system.

Thus, the Depot Lot should also be managed differently, in phases:

- Phase 1:
 - Implement new pricing structure
 - Parking attendants should be trained on new parking management system and approach, including informing patrons of additional parking areas
 - Parking attendants should continue to stack vehicles
- Phase 2:
 - Explore opportunities to reconfigure the lot
 - Monitor utilization of permit holders and transient users and consider introducing designations of a permit area and public parking area
- Phase 3:
 - Introduce payment technology for transient parkers, which would allow for credit/debit card payment
- Phase 4:
 - Explore opening the Meriam Street gate; need careful consideration of the meter technology and circulation impacts

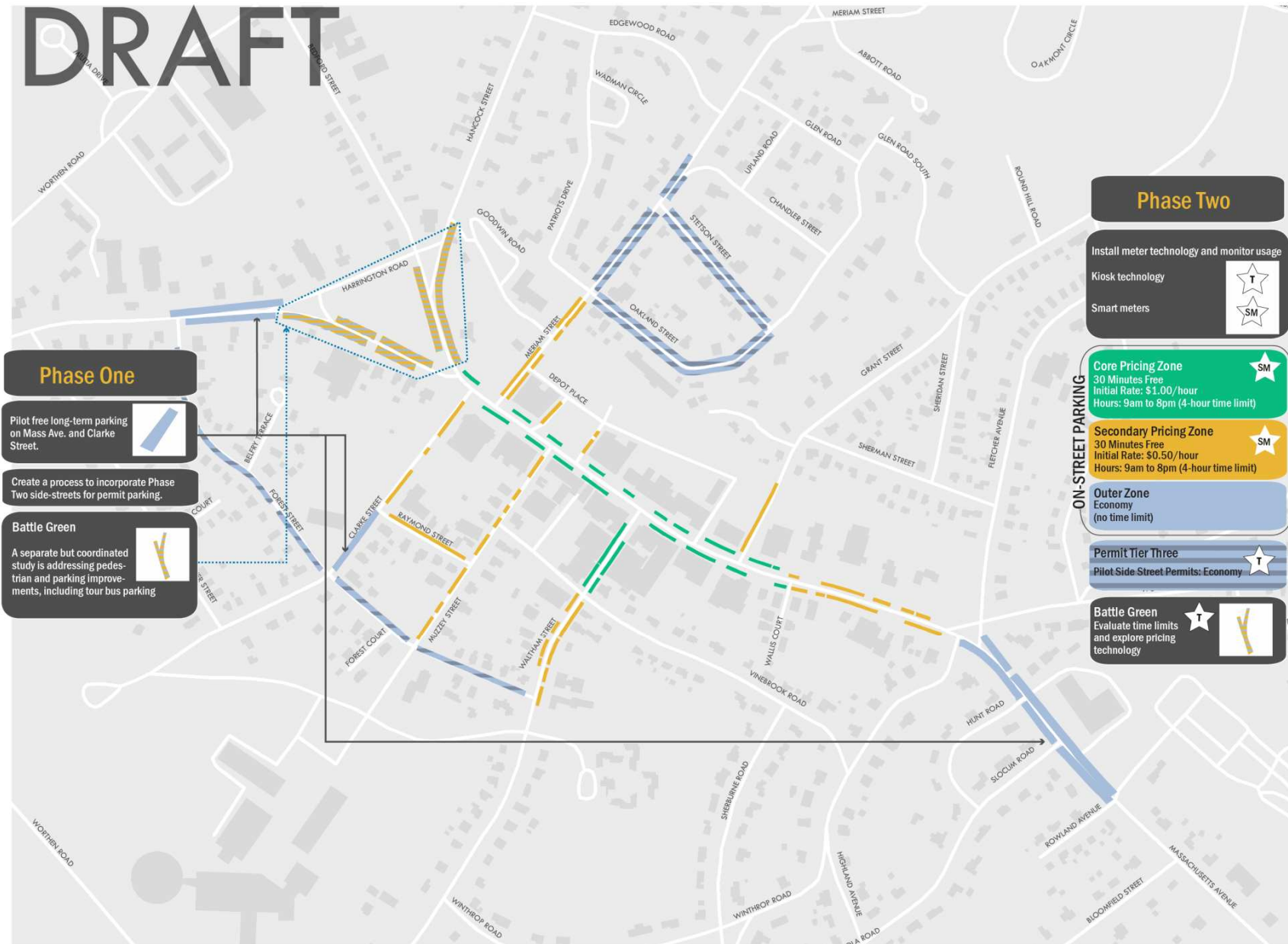
Town Hall Lot

In the short term, the Town Hall lot should remain as primarily Town employee parking. Some spaces within the Lot should continue to be available for permit purchase, but as an economy or discounted permit. The primary change to the Town Hall Lot is to clarify and improve existing signage, as today's signs cause confusion.

In the long term, the Town should evaluate the parking availability, change of surrounding uses (Cary Hall, Police Station), and general use of this lot and consider changing the permit structure and fee system. Options include including the Town Hall Lot in the Tier Two system, shifting/incentivizing employees to park off-site, except for emergency/essential Town vehicles. In addition, the Town should continue to explore a reconfiguration of the lot to use the space most efficiently.

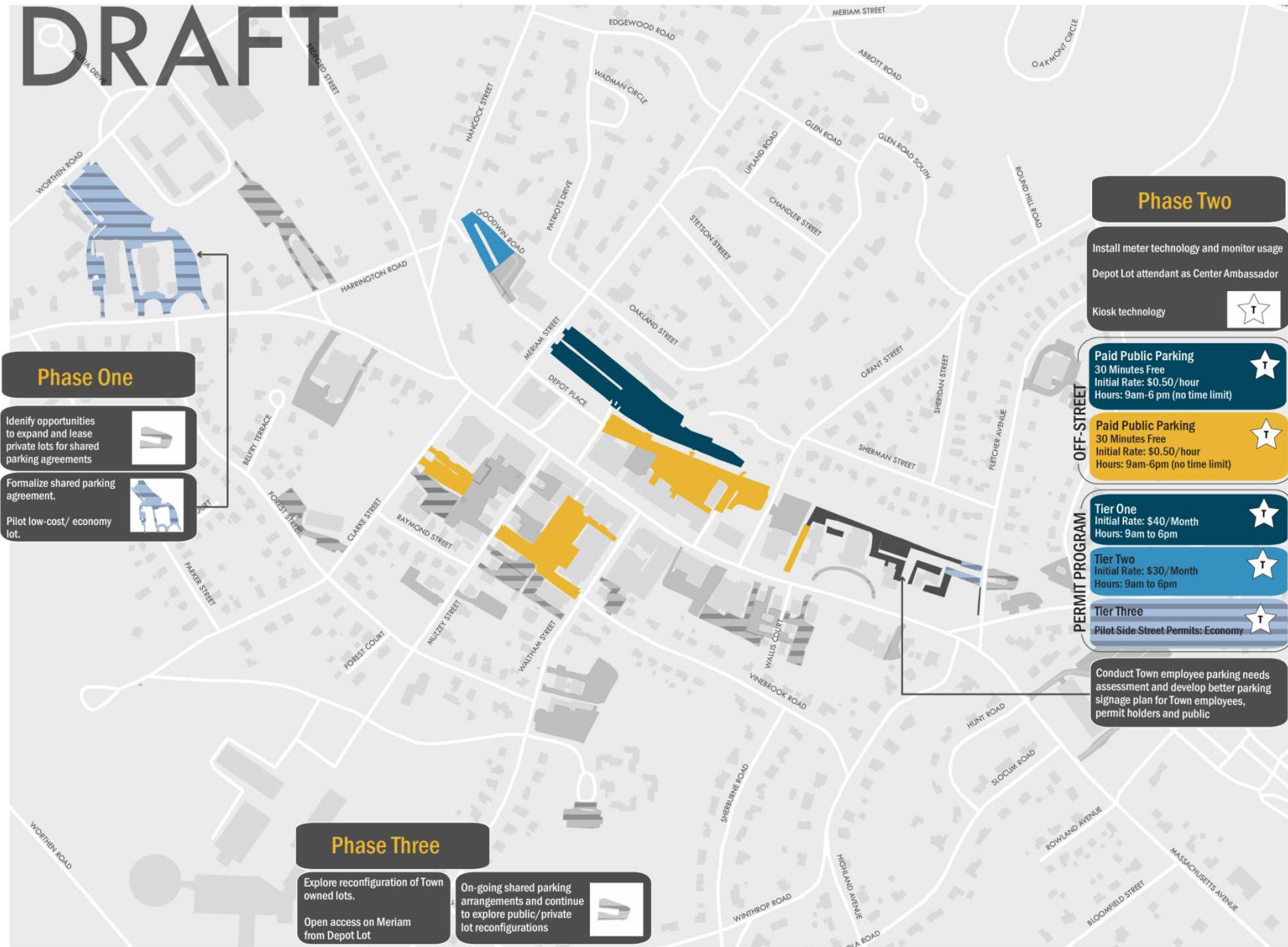
LEXINGTON CENTER PARKING MANAGEMENT AND IMPLEMENTATION PLAN | FINAL REPORT
Town of Lexington

Figure 78 Summary of On-Street Parking Recommendations by Phase



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Figure 79 Summary of Off-Street Parking Recommendations by Phase



Permit Program

Lexington's existing Town Parking Permit program allows any Center employee to purchase an annual permit to park in a number of off-street parking locations within the Center. The program provides hundreds of permit parking spaces in three lots:

- Depot Square Lot
- Church of Our Redeemer Lot
- Town Hall Lot

Over the last year, the program has grown exponentially and there is now an extensive and growing wait list to receive a parking permit. The popularity of this program is no surprise given that the annual price for a permit in the Depot Square Lot is about \$250/year (about \$1/day) and permit pricing for the Church and Town Hall Lot are about \$225/year (about \$0.90/day).

Town wait lists, utilization data, and stakeholder interviews all revealed that the demand for off-street permit parking is high, and that there is little available capacity to accommodate more cars. In addition, there are competing demands between the ability to accommodate customers and permit holders in the most desirable off-street parking locations, in particular the Depot Lot during the lunch hour.

With the growing constraints of today's public off-street public supply, a revised and comprehensive permit parking program should be instituted to address the needs of various user groups in the Center. There will also be a need to accommodate parkers shifting to off-street areas due to on-street parking pricing changes, and potential off-street parkers who will shift to unregulated parking locations in the neighborhoods due to the increase in off-street pricing. The goal of the revised permit program is to anticipate and support the shift of long-term parkers to more remote locations and to add overall supply where possible. This will adequately address and enhance opportunities to create availability along the chain of most valuable on-street and off-street and remote locations for those who are more price sensitive and willing to walk further from their destination. The program should also provide for free long-term parking for employees and others in specially designated areas.

The permit program should be restructured into a three tiered program:

- **Tier One: Depot Lot-** Permit holders will pay \$40/month to park in the Depot Lot. The lot will still accommodate daily parkers at an hourly rate (\$0.50); however, permit parkers are allowed to park at all times.
- **Tier Two: Church of Our Redeemer-** Permit holders will pay \$30/month to park in this lot. The lot will also be open overflow parkers as needed.
- **Tier Three: Town Hall Lot, remote/shared lots, and on-street permit areas:** This includes remote lots, potentially including St. Brigid's Church and other remote privately-owned lots, through formalized agreements to lease existing spaces for public use, creating more public parking supply. In addition, a number of residential streets have been identified to formalize permit parking on-street (described in detail below). The Tier Three permit will be available at an economy rate for commuters and employees. Permit parkers are allowed to park at all times in areas designated as Permit Three and will act as overflow parking for Tier One and Two permit holders.

Figure 80 Summary of Permit Program

Location	Price	# of Spaces	Span per Day
Existing			
Depot Lot	\$250/year	306*	9am - 8pm
Church of the Redeemer (50 spaces) and Town Hall Lot (20 spaces)	\$225/year	70	9am - 8pm
Town Hall Lot	Free	117	9am - 8pm
Total		493	
Proposed			
Tier One: Depot Lot	\$40/month	306*	9am - 6pm
Tier Two: Church of the Redeemer	\$30/month	50	9am - 6pm
Tier Three: Town Hall (137 spaces), remote/shared lots (est. 25 spaces), on-street (215 spaces)	Free and Economy	377*	9am - 6pm
Total		733	

* some of these spaces are for transient use

The recommendation is to restructure the permit system to allow for permit holders the option of purchasing monthly permit purchases rather than an annual permit. This is in response to the online survey results and allows for greater flexibility, especially for part-time or seasonal workers, plus to accommodate those who change their commuter mode by season.

Formalizing On-Street Parking for Tier Three Permits

There are a number of residential streets surrounding the Center that appear to have the capacity and ability to formalize on-street parking. Some of these streets already have some regulated parking; many do not. Taking advantage of existing roadway infrastructure not only can help increase the public supply for the Center, but also helps complement the larger parking management plan. Adding spaces to the parking system addresses the parking demand and preferences of Center residents, visitors, and employees. Formalizing on-street parking on side streets is a relatively inexpensive and low maintenance means of adding useful supply to the parking system; however, candidate streets must be closely evaluated to ensure that infrastructure conditions on these streets are adequate to support parking.

As part of the Tiered Permit Program, several side streets were identified for their potential to add parking. A checklist of criteria has been created with guidance from the Parking Management Group as a standard way of evaluating and prioritizing streets for their potential to accommodate parking. Through an evaluation process, a handful of side streets were identified as the first pilot candidates to test formalized on-street parking. These candidate streets meet most, if not all, of the criteria and should be considered, after review by the Town Engineering Department, Fire Department, and TSAC for implementation. A secondary list of streets has also been identified for potential parking in the long-term; however, these streets would require infrastructure improvements to support safe parking. Each of parking criteria is outlined below with a brief description.

Please refer to the Additional Parking Criteria and Recommendations memo for details of this analysis.

Evaluation Criteria for Side Streets

Considerations

- **Street:** For the purpose of this study, residential streets that do not have formalized parking, or do not allow parking at certain time periods throughout the day, were identified as candidates for evaluation.
- **Location:** To be practical for Lexington Center access, on-street parking should be within a short walking distance. Candidate streets should be about a five-minute walk, or ¼ mile from the Center.
- **Street Width:** Street width is one of the most important design factors for identifying parking potential. A majority of residential streets adjacent to Lexington Center serve as yield streets, allowing either one or two sides of parking with a narrow travel lane for two-way travel. General requirements parking widths for one and two-way streets are outlined below:

Location	One-Way Street	Two-Way Street
Parking on One Side	12' Travel Lane 7' Parking Lane = 19' Street Width	16' Travel Lane 7' Parking Lane = 23' Street Width
Parking on Two Sides	12' Travel Lane Two 7' Parking Lanes = 26' Street Width	16' Travel Lane Two 7' Parking Lanes = 30' Street Width

Source: VHB Lexington Center Parking Study, April 2001

- **Regulation:** Each street's existing parking regulation was recorded as a baseline for evaluating if parking is currently or could potentially be changed. The existing regulation, width, and estimated number of parking spaces have been recorded.
- **Segment Length:** The length of the proposed parking segment was recorded in order to evaluate the potential number of spaces that could be accommodated. Shorter streets and streets with multiple driveways would not yield as many spaces as longer, less interrupted streets.
- **Sidewalks:** The presence of a sidewalk and its connectivity to the larger pedestrian network provides a safe route for drivers to and from their car to their final destination. Each street was evaluated for the presence of sidewalks and the general sidewalk conditions throughout the length of the street segment.
- **Adjacent Land Uses:** The type, density and frontage of existing land uses on streets proposed for parking were examined for context.
- **Traffic Counts:** Understanding the existing level of vehicle volume and operations on a street is important in evaluating the context of candidate streets. Parking design may be affected by the level and operation of traffic. Parking may be seen as a benefit to slow

vehicle speed and buffer adjacent areas, or particular moves or operations may limit the ability to accommodate two lanes of parking.

- **Physical Elements:** Physical elements such as hydrants, bus stops, driveways/curb cuts, and sightlines were recorded to identify areas where parking would not be allowed along a street segment. The presence of these types of elements limits the potential parking on a street.

The following streets should be included in the first phase of formalized, long-term parking:

- Permit (Tier Three permit needed from 9am - 6pm)
 - Forest Street from Mass Ave to Waltham Street
 - Oakland Street from Meriam Street to Stetson Street
 - Meriam Street from Oakland Street to Chandler Street
 - Stetson from Meriam Street to Oakland Street
- No Permit (free, no time-limit)
 - Eastern edge of Massachusetts Ave from Winthrop Road to Rowland Avenue (remove the 'no parking' signs and formalize parking where it is currently unregulated); pending safety review
 - Western edge of Massachusetts Ave from Battle Green to Forest Street (formalize areas that are unregulated as open to parking)
 - Clark Street (southeastern side) between Raymond and Forest
 - Area around Battle Green (phase 1); evaluate paid or permit parking (phase 2)

Technology

Parking management technology has come a long way since standard meters were introduced nearly a century ago. Many meter innovations dramatically changed the operations and management of parking, both for the user and the operator. Upgrades in technology have increasingly enhanced the customer and visitor parking experiences, made more efficient use of enforcement personnel, and simplified the evaluation and monitoring of parking utilization.

Where implemented, parkers are able to utilize a number of mobile and web-based applications to plan their trips ahead of time and find parking with ease. Similarly, drivers no longer need to wonder if or where parking is available; new signing systems are able to provide dynamic and live information on parking availability.

The Center's existing parking meters are single-head, coin operated meters. Limited by coins-only, it is difficult to raise rates, change rates by geography or time of day, or provide dynamic messaging to users. Coins are collected manually and do not provide block by block data that is useful in evaluation. Customers, employees and even businesses are frustrated by the constant search for change just to feed the meters. Input from the public meetings and the online survey revealed that new parking meter technology that accepts debit/credit cards are preferred.

Lexington should consider replacing and adding to its existing technology with:

- Smart meters, which are single-head meters that fit into existing meter poles
- Pay by license plate kiosks, which uses one kiosk for multiple parking spaces, where the user can pay with coin or credit, and the payment is linked to their license plate. Pay by plate technology can also replace the permit program hangtag system, where users would

not need to display a hangtag, but instead their license plate would be linked with their purchase of a monthly permit.

- Pay by phone, where a parker can pay to park (or add time) via a cellphone
- License plate recognition for enforcement officers, where a handheld unit can easily and quickly scan license plates and reconcile whether or not payment is valid

Enforcement

Like most communities, Lexington's existing parking management system relies heavily on enforcement to ensure desired compliance of regulations. However, enforcement is time-consuming and labor intensive. Because every regulation and parking strategy can be undercut by those who attempt to "game the system", this reduces the efficiency and effectiveness of existing enforcement policies. Moreover, enforcing time limited parking is even more cumbersome and labor-intensive than enforcing pricing.

Improved enforcement can be very helpful in reaching the parking goals set by the regulatory framework. Parking enforcement operations, while always necessary, should be designed to work in tandem with the larger goals and pieces of the parking management plan. Enforcement should help to ensure and enforce goals such as the Town Parking Availability goal, and not be punitive and deter customers and visitors away from the Center. Ticketed customers complain to businesses or worse – never come back.

Instead of relying heavily on citation enforcement, the Center should first amend its parking regulations to rely less on time limits to manage behavior and more on pricing, as described in the Demand-Based Pricing section. To complement the customer-first approach, enforcement staff (and Depot Lot attendants) should be used not just to ticket cars but also be Center ambassadors for the Town and Visitors Center.

Enforcement is part of an integrated parking system. Lexington should utilize its Parking Control Officers (PCOs) as Center Ambassadors for visitors in the Center, focused more on encouraging appropriate parking behavior through friendly assistance and providing directions, as opposed to diligent ticket writing. Enforcement should focus on ensuring availability for customers. The PCOs may also adapt its current parking violation tickets to provide more information, such as tips on how to use the technology, what the rules and regulations are, and where to find free parking. Similarly, coordination is essential between the PCOs and parking management. PCOs should participate in regular meetings with the Town to serve as a feedback loop for better management of parking resources. This would include things like identifying areas of confusion to customers, locations where availability is poor, areas where regulations should change, etc.

Recommendations for improving enforcement operations include:

- PCOs should be Center Ambassadors, representing the Town and Visitors Center. PCOs should be trained and equipped with Center tourism information, including historic sites, Liberty Ride information, local restaurants and shops, and other information.
- PCOs should be trained and equipped with parking information, including maps, to be able to direct price-sensitive customers to free, long-term parking areas, and others to appropriate parking areas, including remote parking when necessary.
- PCOs should vary enforcement hours throughout the day and week so regular Center visitors and employees do not know when to expect enforcement (e.g. vary hours within meter spans).

- The Town should consider a first-ticket free policy, which means that for each calendar year, a parker's first violation fee is waived.
- The Town should provide information to violators on printed parking citations, e.g. unregulated, free parking opportunity locations.
- PCOs should work with the PMG, Town staff, and downtown businesses to ensure adherence to and satisfaction with regulations, and make recommendations for modifications to the management program.
- As technology upgrades are installed, integrate enforcement & ticketing with upgraded technology to maximize efficiency.

IMPROVE ADMINISTRATION

The Town has a varied and wide range of responsibilities with respect to managing the parking supply. These responsibilities go above and beyond pricing and technology - this includes administration of parking permits, installation of signage, updating and relying on its zoning code to approve projects, and more. Although many of these functions - and the others that exist - lay within various departments within the Town government, they all must be coordinated and consistent. The Town has already made great strides in consolidating coordination of parking management under the Town's Economic Development Director, or "Parking Champion", who is charged with ensuring that the Town's departments are all working together under the same goals.

Under the Parking Champion's coordination, the following management strategies are recommended to improve administration of the parking system:

- **Information and Wayfinding**, which includes what drivers read and hear before they arrive in the Center, what they see when they arrive, and what guides them around the Center
- **Shared Parking Program**, where the Town brokers shared parking agreements with or between private parties
- **Zoning**, to update the Center's zoning code related to parking requirements
- **Ongoing Management**, as the parking management program needs to be regularly evaluated and updated to keep pace with changing demands and Town policies

Information and Wayfinding

Despite the proximity of public parking facilities in the Center, one of the most commonly heard complaints about parking was the lack of informational parking signage. Historically, parking wayfinding signage in Lexington was scarce or non-existent. Parking signage, both in public and private lots, is also often hard to distinguish and not clear to visitors, creating confusion on where they are allowed to park (and for how long). However, in the past year, the Town has made great strides in branding a specific parking wayfinding signage, placed in several strategic locations along Massachusetts Avenue. The signs are branded with a color scheme and consistent look, so they are easy to spot around the Center. The Town understands that having clear guidance for these patrons, unfamiliar with the area, is a crucial component of any visitor's experience in the Center.



Easy to read and understand parking and wayfinding signage is a critical component of deciphering a parking system. Signage that guides motorists to on and off-street parking deters drivers from excessive cruising and frustration. A wayfinding program should encourage a “park once” or “park and walk” environment, focusing not just on getting cars into the parking facilities, but getting people to visit multiple destinations on foot without moving their cars. In addition to parking facilities, signage should identify historic sites of interest, area businesses, the Minuteman Path, municipal buildings, and other points of interest, plus direct patrons to pedestrian pathways around the Center.

Public Parking lots should also have better signage identifying them as such. The Depot Lot is a tremendous resource, available for visitors, customers and employees alike. Yet, as presently marked, it is not clear that the lot is open for business to all. Signage improvements should include clear indications of availability, and rate and pricing structures clearly published. Even a simple sign is a start, but more extensive gateway design should be explored.

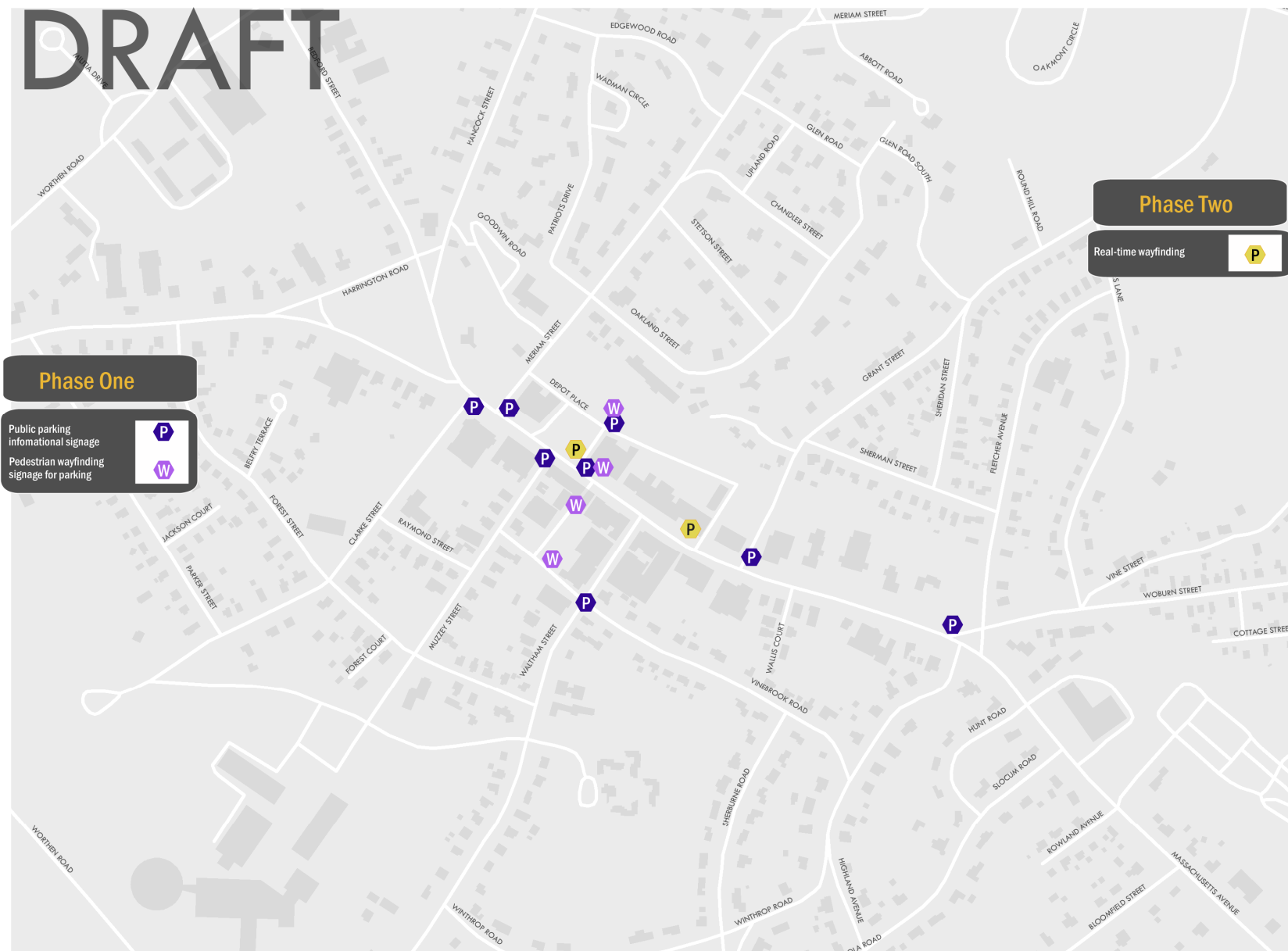


Another critical component of providing information is to publish parking information before the user gets to town. The Town should invest in updating its online parking informational map to provide easy to read parking information for each facility, plus highlights Center destinations. A partnership with the Chamber of Commerce to develop this map would ensure that area businesses could also be featured on this resource, and that area businesses could use this map as a resource on their own websites. The parking map could also link to trip planning tools and be used as the basis of an educational/marketing campaign to update regular users of the system of coming changes. This information should be linked to regularly visited websites (including LexEngage) and printed materials. The information provided about the parking management program should be positive, and encourage people to embrace and learn the new system.

The Town may also consider installing dynamic/real-time parking signage at the Depot Lot and/or other large surface parking lots. Real-time signage can show the number of available spaces, display announcements of alternative locations of parking availability, and provide specific information such as directions to special events, temporary detours, or closure information.

The Town should also explore designating tour bus pick-up and drop-off at Depot Place, as well as nearby large parking lots for tour bus parking.

Figure 81 Parking Signage Locations



Shared Parking Program

Mixed-use downtowns offer the opportunity to share parking spaces between various uses, thereby reducing the total number of spaces required compared to the same uses in stand-alone developments. This is a primary benefit in mixed-use centers where visitors are able to park once and walk to multiple shops throughout their visit. Shared facilities utilize parking spaces more efficiently, reduce the amount of land dedicated to parking, and reduce traffic congestion, as one parking space can be used for multiple uses.

The Center's parking utilization analysis revealed that throughout the course of a weekday, off-street public parking facilities reach capacity during the afternoon and the evening peak; meanwhile, there is a significant available supply of parking in privately-owned and restricted lots. This suggests that to utilize parking resources most efficiently, the public and private sectors should collaborate to better utilize the under-utilized parking spaces, either for public use or for employee permits.

Figure 82 Public Access: Off-Street Weekday Parking Utilization

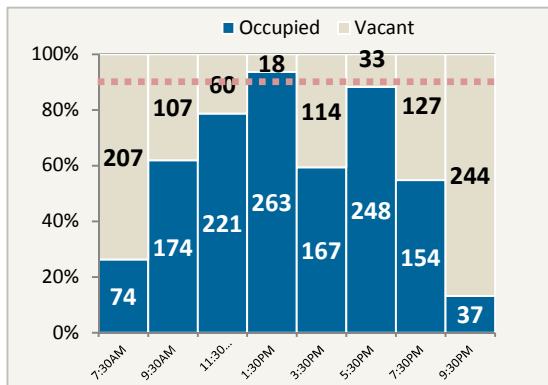
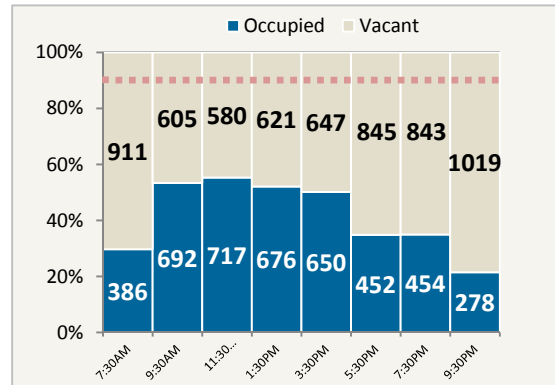


Figure 83 Restricted Access: Off-Street Weekday Parking Utilization



The Town already engages in leasing some of these under-utilized parking areas, including current lease agreements with the Church of Our Redeemer and NSTAR. The Town should continue this model and move forward with negotiating to better utilize parking areas within a short walk of the Center, particularly with parking facilities that are under-utilized during the lunchtime peak. These locations could be added to the Tier Three Permit Program or the Outer free public parking. Specifically, the Town should first pursue agreements with St. Brigid's Church and the Federal Credit Union.

Figure 84 St. Brigid's Church Weekday Parking Utilization

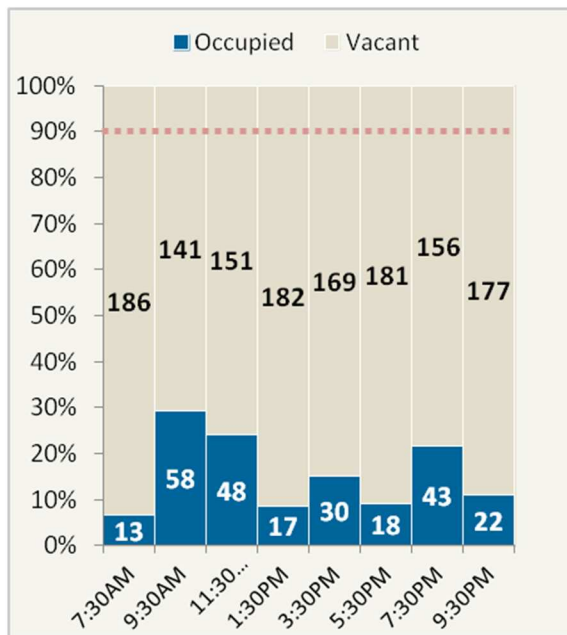
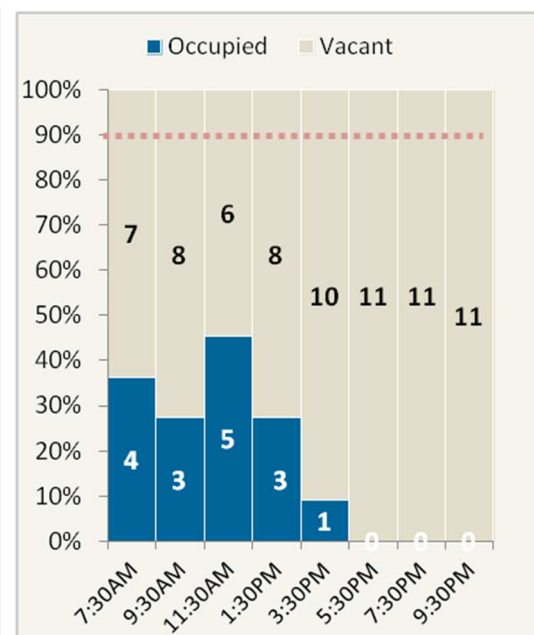


Figure 85 Federal Credit Union Parking Utilization



Leasing of private parking for public purpose is not uncommon in many communities, although the process can be challenging. However, having a well-structured shared parking program in place that clearly outlines the options that the Town can offer to landowners in exchange for the ability to utilize their parking is essential. The Town should categorize its shared parking opportunities into two tiers:

- **Public Parking:** The Town would pay a higher amount for privately leased spaces that are designed as hourly public parking. The lots would be signed and priced consistently with other public lots. The revenue would be split 50/50 between the landowner and the Town, and the Town would be responsible for lot landscaping, signing improvements, and meter installation/maintenance.
- **Permit Parking:** The Town would pay a lower amount for privately leased spaces that are designed as permit parking. The revenue would be split 75 landowner/25 Town, and the Town would assist with signage, basic lot maintenance, and striping reconfigurations if needed.

As part of these arrangements, the Town provides assistance with signage, maintenance of lots, and enforcement/security. The agreements should address liability/insurance concerns for the landowner. In addition, the Town should guarantee retained developments rights, which assures that the shared parking areas can be returned to the landowner if development is planned.

This type of program can be particularly advantageous where the Town strategically leases parking lots that abut existing public lots, removes barriers between lots (such as fencing and gates), and restripes the lots as a single, combined facility. By reducing redundant circulation, minimizing entrances and exits, and streamlining regulations and management, the Town can effectively operate many more spaces, create greater revenues to offset lease payments, plus make available more parking supply for public use.

In the Center, there are numerous opportunities to redesign both public lots and potential future shared facilities. The parking behind Cary Memorial Library is currently separated into four different parking areas with a complex geometry and numerous curb cuts. Today, there are approximately 140 parking spots in each of these separate lots, and a combination and redesign of these lots can provide an additional 55 parking spaces. The shared parking configuration consolidates all lots, and closes one vehicular entrance on Muzzey Street, and improves the overall circulation and pedestrian experience in and around the lot.

There are other opportunities to create this type of efficiency with public and privately owned facilities, as well as redesigns of existing municipal lots to increase supply, simplify vehicular circulation, and improve pedestrian safety, in particular, the Town Hall Lot and the Edison Lot.

Figure 86 Cary Library Lot and Private Lots Reconfiguration Example



Zoning Code

Lexington's parking-related zoning code (Section 135-5.0) code has four primary goals: 1) promote traffic safety; 2) increase traffic-carrying capacity of streets and highways; 3) reduce hazards to pedestrians; 4) protect adjoining lots from nuisances created by cars and parking lots (such as excessive light).

The parking zoning code should be updated in the Center to reflect its already existing mixed use environment. The recommendations below include a list of zoning code updates and recommendations that could be applied to Lexington Center.

- **Convert minimums to maximums:** Most of Lexington's parking minimums are higher than or at least as high as national suburban standards. Observed parking demand shows that, in aggregate, the Center has a sufficient supply of parking to satisfy current demand, and that its actual parking generation rate is lower than both zoning and ITE standards. Current zoning requires a certain amount of parking to be built per square footage of land use. The result is that either development does not happen due to physical or fiscal constraints, or development gets built in a way often driven by the need to provide parking.

Parking minimums should either be eliminated entirely or converted to parking maximums. These minimums can be converted to parking maximums, allowing for the market or a negotiated process to determine the amount of parking needed for a given development. For projects less than 10,000 square feet, minimum parking requirements can be eliminated altogether. Combined, these zoning initiatives will help to promote the types of development projects in Lexington that support village-oriented growth that complement the existing network.
- **Shared parking:** Lexington's current shared parking code language does not include guidance for multiple uses to share parking. The code should be updated to incorporate:
 - The language on shared parking should be broad to cover all land uses, including residential.
 - Zoning should allow for shared parking between properties to discourage the improvement of existing lots and reduce the growth in independent surface parking. Proximity provisions ("parking must be within 1000 feet") can be included.
 - Zoning should allow, and set up guidelines, for combining off-street parking facilities between multiple properties.
- **In-lieu fees.** In some communities, new developments can waive their minimum parking requirements by making an annual payment (in-lieu of providing parking) to the municipality. The fee is usually utilized for transportation improvements, particularly shared public parking facilities. This allows the redevelopment of constrained sites and provides a revenue stream to support the construction/maintenance of shared public parking facilities such as a central lot or garage. Lexington may consider requiring developers to pay an assessment or per space in lieu of providing parking (based on general Town standards), and/or purchasing employee parking permits for their employees. This would help generate revenue for the parking program, and contribute to the long term ability of the Town to operate and maintain its parking assets and Center transportation infrastructure.
- **Curb cuts:** The current curb cut code guidance limits the number of driveways to two per street line, which means that a corner parking lot could have up to four access points.

The curb cut provision should have language that encourages the minimum number of possible curb cuts, including using existing curb cuts from other facilities, to reduce the number of, width, and frequency of curb cuts helps to promote walkable, safe streets. Further, design standards should be established and include that the sidewalk should be level across the driveway, which necessitates a slower-speed raised entry/exit, as opposed to a dropped curb.

- **Provisions on pedestrian and bicycle measures.** When there is a new development or a change of use, the developer is currently required to provide bicycle parking based on the number of vehicular spaces provided. It is recommended that the ordinance be changed so that the number of bicycle parking spaces are provided in relation to the scale and type of development, and minimum design standards for such parking facilities are specified. The Association of Pedestrian and Bicycle Professionals provides good national standards on secure bicycle parking racks. In addition, the Town may want to require the developer to install or upgrade adjacent pedestrian infrastructure, particularly ADA compliant curb ramps.
- **Specific transportation demand management language and recommendations.** Transportation Demand Management (TDM) refers to a package of strategies to encourage residents and employees to drive less in favor of transit, carpooling, walking, bicycling, and telecommuting. It encompasses financial incentives such as parking charges, parking cash-out, or subsidized transit passes; Guaranteed Ride Home programs to give employees the security to carpool or ride transit; compressed work schedules; and information and marketing efforts. TDM programs have been shown to reduce commuting by single-occupant vehicle by up to 40%, particularly when financial incentives are provided. With existing transportation choices in Lexington, including public transportation options, developments should be required to implement a package of TDM programs for its employees (and/or participate in a TMA).

Ongoing Management

A parking management program is only effective if it adapts as the Town changes. This means that the Town must regularly adjust the parking management plan, including on-street and off-street rates, to achieve set availability goals and work with Center improvements and changes. The Town should:

- **Monitor and evaluate performance of on- and off-street parking in the Center on a regular basis.** After the initial recommendations are implemented, the Town should monitor parking utilization monthly (and eventually quarterly), and adjust the regulations and pricing scheme to achieve availability goals.

The Parking Management Group (PMG) and Town staff (Economic Development, Police, Planning) should be responsible for conducting utilization surveys to measure parking availability during workday and evening peak hours. For the initial six months, these surveys should be conducted on a monthly basis on Tuesday, Wednesday, or Thursday (once during the workday peak and once during the evening peak). The utilization rate for each block face and lot should be recorded and tabulated by the Economic Development Department. After six months, the PMG and Town staff should conduct surveys at least once every quarter. The pricing should be adjusted every six months, adjusting rates \$0.25 at a time when the average utilization is ten percentage points or more above or below the target availability level.

- **Manage the program through the Parking Champion and the Parking Management Group (PMG).** The periodic monitoring and evaluation of the program should be reviewed and implemented through the Parking Champion and Parking Management Group. This team should track and analyze all data, make decisions on programmatic changes, and coordinate with Town Departments on a regular basis. The Parking Champion and Parking Management Group should be the official management group and be responsible for the ongoing implementation and management of the parking management plan. This Group should consist of 5-8 people, including Town staff. Non-Town staff should be representative of the Center, including people such as a property owner, a business owner, a resident, a cultural/tourism representative, and a Center Committee representative. Each Group member should serve for no more than two years and should be appointed by the Town Manager or his/her designee. This Group should be staffed by the Town.
- **Adapt the program as Lexington Center changes.** As the retail land uses, the tourist economy and patterns, and Center infrastructure and streetscape plans change and grow, the parking management system must proactively augment to these programs and growth. The Parking Champion and Parking Management Group should continue close coordination with Town Departments and the Center Committee to be abreast of ongoing and expected developments and changes that will impact the parking system.

INVEST IN THE CENTER

Lexington is successful because it has the community, businesses and tourism activities that many New England communities strive to attract and promote. Historic attractions, thriving retail, quality restaurants and culture have helped to shape the Town's identity as both a regional attraction and local attraction. Business owners, residents, tourists, volunteers, and others continue to visit and invest in the Center because they are devoted in making this community asset thrive.

The Town recognizes that in order to maintain an attractive and vibrant Center, parking policies and practices must be coordinated with broader goals for the community and address the day-to-day needs of locals and visitors. However, parking management solutions are never just about parking itself, but how parking interfaces and connects with the transportation network and built environment. This relationship insinuates that the parking system revenues should be coordinated and connected to Center investments, and vice versa.

The Town should consider:

- **A Parking Fund**, which, after related capital and maintenance expenses, invests parking system revenues back into the Center environment, including the transportation system, parking system maintenance, streetscape, lighting, pedestrian and bicycle access, tourism and marketing, and Center programs and events
- **Access Improvements**, including upgrading pedestrian connections and infrastructure, transit amenities, and bicycle racks and facilities
- **Transportation Demand Management (TDM) Programs**, to incentivize Center visitors to carpool, take transit, walk, or bike to the Center

Parking Fund

Lexington's parking system exists to help re-enforce the Center's overall economic development, but also larger goals of the investing back into the community. Many of the recommendations from this study are not solely about parking, but to the overall transportation and streetscape system in the Center. Inevitably, improvements to the parking system, such as shared parking arrangements, and streetscape infrastructure, such as recommendations stemming from the Center Streetscape Plan, will require substantial funding from the Town in order to make these investments.

Net revenue from the Town permit program, parking meter fees, and parking citations should be invested in a separate Parking Fund that would be used to invest back into the Center. This program should be transparent to the public, so when a patron drops a quarter into the meter, that person knows that their payment first pays for the parking infrastructure, but then goes directly towards Center improvements. If parking revenues "disappear" into the General Fund, patrons (and Center businesses) will be less likely to support a paid parking system. When Lexington's merchants, customers, and residents can clearly see that the monies collected are invested physical Center improvements - plantings, facade improvements, safety and security officers, the parklet, bicycle racks, and more, many are willing to support parking policies that generate tangible benefits for the Center. If experience from other communities is any guide, many will actually become active advocates for the concept.

To develop support for parking management changes, it is crucial to give local stakeholders input in developing parking policies, deciding how Lexington's parking revenues should be spent, and overseeing Parking Fund investments to ensure that parking revenues are spent wisely.

Example uses for Parking Fund net revenues include:

- Landscaping and streetscape greening
- Accessibility upgrades, including non-compliant handicapped spaces, curb ramps, and crossings
- Parking, transit, pedestrian, and bicycle infrastructure and amenities, including intersection improvements
 - Bicycle facilities, including racks and other infrastructure
 - Alleyway improvements
 - Sidewalk connectivity
 - Minuteman Path signage and connectivity
 - Intersection improvements
- Wayfinding and parking signage
- Parklet investments
- Additional parking enforcement and/or safety officers
- Tourism and Visitor Center programs and events
- Center streetscape plan implementation
- Marketing and promotion of Center businesses and activities

A number of different organizational structures can be used to establish and oversee a Parking Fund. The Fund can be managed by a Town sub-committee, such as the Parking Management

Group, or a local business association, with support from Town staff. Additionally, the Fund could also be established as a financial entity (somewhat like an assessment district), which would require by ordinance that parking revenues generated in the Center be spent in the Center only. Under this arrangement, the Fund would be managed and housed within an existing Town department.



Access Improvements

The Center is endowed with a dense and walkable street network that connects mixed-use retail, offices, and restaurants to nearby residential streets and neighborhoods. The Center has an inviting historic, small-town New England appeal, which attracts employees, residents, tourists, and customers at all times of the day. However, there are several barriers throughout the Center that deter pedestrian activity, thus limiting the reach of the safely accessible parking supply. This is often due to actual and/ or perceived barriers such as safety, visibility, and connectivity to and from parking lots located in the Center and pathways into adjacent areas, including very close by residential neighborhoods. These barriers often affect user groups' perception of parking in the Center differently, and if left unaddressed, will not incentivize changes in parking behaviors.

To begin to invest in the transportation network, additional funds will be needed. As part of the overall recommendations of this study, these improvements should be funded in part by the additional revenue generated in the Parking Fund.

Pedestrian Improvements

The Town should work to enhance pedestrian connections to, through, and from parking locations. Comments from the public process identified safety and access issues, including the lack of lighting at the Cary Library Lot, difficult and daunting crossings on Massachusetts Ave and around the Battle Green, and poor pedestrian connections (and vehicular circulation) in the Depot and Town Hall lots.

In addition, there are a number of informal pedestrian pathways linking surrounding areas to the heart of the Center, including parking supply. The informal pathways should be formalized, paved (if not already) for year-round use, and lit to provide accessible access where possible. These areas have been identified for these types of improvements:

- From Oakland Street through the Depot and Edison lots to Mass Ave (with coordination with landowner)
- From Grant Street through the Edison Lot to Mass Ave
- From Vine Brook Road and Mass Ave just west of Wallis Court
- From the Depot Lot and Mass Ave near Depot Place
- Alleyways that connect public lots to Mass Ave and Waltham Street

Figure 87 Example Pedestrian Access Areas in Need of Improvement



Bicycle Improvements

Lexington's great multi-use asset - the Minuteman Bikeway - is in the heart of town. This amenity provides local and regional access for visitors, residents, and employees choosing to bike, walk, or run as a means to getting to and from the Center. This critical asset should be leveraged as a means of offsetting parking demand and vehicle trips to the Center. A critical element is providing supporting bicycle infrastructure in the Center, particularly appropriate bicycle parking racks. Today, bicycle parking facilities are concentrated in the core of the Center or public parking lots.

The Town should invest in enhancing the presence, location, type, and supply of bicycle racks to promote biking as a means of travel to and from the Center. Short-term bicycle racks should be strategically placed in front-door locations, nearest to shops and businesses, and near or along the Minuteman Bikeway to allow visitors and customers using the multiuse path the option of stopping the Center to visit retail shops, cafes, or restaurants. Long-term, covered, and secure bicycle parking should be provided in easy to access locations, consistent with the Association of Pedestrian and Bicycle Professionals bicycle parking guidelines.

Figure 88 Example Bicycle Parking Areas in Need of Improvement



Transit Improvements

Parking and public transit in the Center are linked for many reasons, but mainly because there are commuters that park in the Center and hop on the bus to go elsewhere, and commuters use transit to arrive in the Center. Promoting use of public transit in the Center - both MBTA and Lexpress buses - can help reduce parking demand, traffic congestion, and get more feet on the street. The Town's Streetscape effort is thinking carefully about how locations of bus stops interface with the on-street parking environment, as there are many competing demands for curbside space.

Additionally, the Town may consider introducing off-site remote parking and utilizing the existing Lexpress routes and vehicles as a park and ride shuttle. The remote lots should be located on existing Lexpress routes with as high of frequency as possible to encourage use of these remote lots.

Handicapped Parking and Accessibility Improvements

The inventory of designated handicapped parking spaces resulted in a spatial analysis of all locations of handicapped parking spaces in the Center, both in public and privately-owned facilities. The utilization counts of these spaces indicate that overall, there is adequate supply of handicapped spaces. However, several locations of these spaces need to be reviewed in terms of ADA compliance and accessibility. The team recommends the establishment of a policy on designated handicapped parking, which would define/outline a process for requesting and evaluating new handicapped spaces. These policies/guidelines can also be used to evaluate/change existing spaces.

The policy should include:

- A goal of creating overall parking availability in key areas
- Have geographic boundaries
- Include a process of how to request additional handicapped spaces or change locations of existing handicapped spaces (e.g. what Town department, what needs to be included in a request, how to submit a request, the approximate turnaround time of request, who must review/approve request, etc.)
- Design parameters:

- Adjacent to ADA compliant pedestrian ramps
- Adjacent/near appropriate land use
- The balance between van-accessible spaces and standard handicapped spaces
- As close as possible to ADA accessible building entrances/exits
- Relationship/distance to other on-street handicapped parking spaces
- Relationship/distance to off-street handicapped parking spaces, both public and private
- Utilization of nearby handicapped spaces
- Other relevant site specific factors



Transportation Demand Management Programs

Transportation Demand Management (TDM) refers to a package of strategies that encourages travel by transit, carpooling, walking, bicycling, and teleworking. TDM programs help incentivize a shift to non-SOV modes, which can have a drastic impact on both the health and well being of individuals, but also reduce strain on the traffic and parking environment. Even a small shift of Center-goers from SOV to other modes would have a substantial impact on Center parking demand.

These programs are often administered by the business community, municipalities, a Business Improvement District, a Transportation Management Association, or similar. TDM programs can span from financial incentives such as unbundling parking, parking cash-out or subsidized transit passes; Guaranteed Ride Home programs to give employees the security to carpool or ride transit; compressed work schedules; and information and marketing efforts. In addition to physical pedestrian and bicycle access improvements, noted previously, physical improvements such as sheltered or secure bicycle parking and supportive facilities such as showers and changing facilities in buildings can be installed to promote the use of the Minuteman Bike Path as a means to commuting to work.

TDM programs have been shown to reduce commuting by single-occupant vehicle by up to 40%, particularly when financial incentives are provided. With existing transportation choices in Lexington Center, including public transportation and LexExpress options, employers, including the Town should be encouraged to implement a package of TDM programs for its employees.

IMPLEMENTATION PLAN

Not all recommendations can or should be implemented at once; the implementation plan below indicates Phases One, Two, and Three for program changes.

Category	Recommendation	Details	Entities Responsible (in addition to the Economic Development Dept and PMG)	Immediate Action	Subsequent Actions
PHASE 1					
Improve Admin	<p>Identify opportunities to expand and lease private lots for shared parking agreements</p> <p>Pilot an economy lot through a formalized shared parking agreement</p>	<p>Explore private lots as potential locations to lease shared parking agreements for public use. The town provides maintenance and liability and guarantees retained development rights. The town should offer up to two tiers for lease agreements</p> <ul style="list-style-type: none"> - Higher payment for hourly parking : ~50% town margin - Lower payment for permit parking: ~25% Town margin <p>afford landscape and signing improvements</p> <p>affords striping and basic maintenance</p>	Chamber of Commerce, Individual Businesses and landowners	Work with landowners to discuss shared parking potential	Draft and review policies for shared parking agreements. Determine which sections of lots (if not all) can be designated for shared parking. Implement and publicize. Adjust rates where needed.
Improve Admin	Improve and install parking wayfinding signage for vehicles and pedestrians	Improve information: improve/add wayfinding signage oriented towards vehicles and pedestrians	Engineering, Public Works	Identify type and locations for signage; identify preferred	Work with local businesses to develop and map downtown businesses, attractions, and parking locations (see Phase 2)

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Category	Recommendation	Details	Entities Responsible (in addition to the Economic Development Dept and PMG)	Immediate Action	Subsequent Actions
				pedestrian/vehicular paths	
Create Available Parking	Pilot long-term parking on side streets (Free parking on Mass Ave and Clarke Street) Create a process to incorporate side streets for permit process	Evaluate streets per evaluation criteria. If streets meet the criteria, they should be regulated as all day parking.	Police Department, Engineering, Public Works, Schools, residents	Use identified streets and evaluate with residents and Town Departments. Implement wherever possible.	Monitor and evaluate every 6 to 12 months. Add more streets/adjust signage/regulation where needed.
Create Available Parking	Change loading zone regulations to curbside parking during off-peak loading hours.	Current loading zones are 24/7; evaluate peak loading times and allow curbside parking during off-peak loading hours.	Engineering, Public Works	Change loading zone regulations to curbside parking during off-peak loading hours.	Reevaluate curbside space (in coordination with the Streetscape Plan) to maximize prioritized curbside uses.
Create Available Parking	Adopt a parking availability goal	Adopt an ordinance to manage parking to availability (15% availability on-street and 10% availability off street). The Ordinance should contain monitoring and evaluation language as part of the program that allows Town staff to make pricing and related management changes without the Board of Selectmen approval.	Board of Selectmen	Draft policy and work with BOS to adopt.	Prep evaluation and monitoring forms and plans; evaluate and monitor parking utilization and adjust rates/regulations.

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Category	Recommendation	Details	Entities Responsible (in addition to the Economic Development Dept and PMG)	Immediate Action	Subsequent Actions
Improve Admin	Monitoring/evaluation and program implementation	Update PMG roles and responsibilities to implement, monitor, and evaluate program	Board of Selectmen	Redefine PMG roles and responsibilities	Begin implementation/monitoring/evaluation
Create Available Parking	Research and pilot new technology for payment options. Plan and budget for new technology.	Invite several parking technology vendors to pilot/test new parking payment technology on Mass Ave and/or in lots. Use for demonstration, education, and user feedback.	Public Works	Contact parking vendors (utilize MAPC RFI list). Schedule a pilot/testing period and advertise.	Develop capital plan to install and use smart meters, pay by plate kiosks, pay by cell, and LPR enforcement handhelds. Include capital costs in next FY budget.
Create Available Parking	Determine initial demand based pricing scheme, create pricing zones and update meter rates	In Lexington Center, two meter zones should be created - Rates in the core, primary zone, should start at \$1.00 /hour - Rates in the secondary zone should start at \$0.50/hour	Chamber of Commerce, Individual Businesses and Public Works	Evaluate and prioritize locations and boundaries of the two metered zones. Determine appropriate pricing (tiered pricing).	Document needed regulatory ordinance changes and implement and publicize proposed changes. These boundaries should be modified based on community feedback and practical application.
Invest in Center	Establish a policy on designated handicap parking	Create a standard policy that lays out the process and design parameters for creating handicap parking within Lexington Center.	Disabilities Commission; system users	Draft a program policy for identifying and creating handicap parking.	Evaluate existing handicap spaces according to policy.
Invest in the Center	Install bicycle parking	Install bicycle parking (short and long-term parking).	Public Works, Bicycle Advisory Committee, Center Committee	Identify suitable vendors and historic district compliance	Review suitable locations for bike racks.

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Category	Recommendation	Details	Entities Responsible (in addition to the Economic Development Dept and PMG)	Immediate Action	Subsequent Actions
PHASE 2					
Create Available Parking	Improve Battle Green parking management	Identify and mark tour bus loading and parking Evaluate eliminating Battle Green time limits Coordinate with Streetscape Plan	Tourism, Engineering, Public Works	Identify specific tour bus loading/unloading and parking areas	Explore impact of eliminating time limits surrounding Battle Green
Create Available Parking	Install new payment technology	Issue RFP and contract with vendor for new meter technology. Consider including pay by cell and LPR enforcement handhelds.	Police Department, Public Works	Determine timeframe of new technology implementation.	Negotiate and work with technology vendors to implement.
Create Available Parking	Integrate handheld enforcements (electronic tickets and/or ALPR) with meter technology	Handheld enforcements (electronic tickets and/or ALPR) equipment should be integrated with meter technology in order to maximize enforcement and ticketing efficiencies.	Police Department	Review with kiosk and smart meter technology	Explore the feasibility and cost effectiveness of leasing handheld enforcement units through same vendor contract.
Create Available Parking	Enforcement and Depot Lot staff as Center Ambassadors	Parking enforcement and Depot Lot attendants should focus on information and education while working to ensure adherence to parking regulations. Vary hours to match meter span.	Police Department, Tourism	Develop policy on Enforcement, including varied enforcement spans, and Depot Lot staff as visitor ambassadors	Create information and provide training on parking policy, show how meters work, provision of maps and directions, first ticket forgiveness, information on business and events. Develop appropriate materials for distribution.
Create Available Parking	Update on and off-street parking time limits (and include a free period)	On-street Core and Secondary zones: 4-hour time limit (with 15 or 30-minutes free). On-street Outer Zone: no time limit. Lots: no time limits.	Police Department	Document needed regulatory ordinance changes.	Prioritize streets within zones and what regulatory updates should be made.

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Category	Recommendation	Details	Entities Responsible (in addition to the Economic Development Dept and PMG)	Immediate Action	Subsequent Actions
Create Available Parking	Update pricing on-street	With new technology in place, introduce new pricing zones, time limits, and span.	Engineering, Public Works	Update signage and web-based information.	Evaluate and monitor utilization.
Create Available Parking	Update employee permit program	Monthly three tiered permit program: - Tier One: Depot Lot. Permits: \$40/month. - Tier Two: Church of Our Redeemer: \$30/month. - Tier Three: Town Hall Lot, remote on-street spaces, St. Brigid's, others. Free. Overflow parking for Tier One and Two permit holders.	Police Department	Notify existing permit holders and wait list of upcoming changes.	Acquire a web-based payment system for monthly permit purchases; eliminate annual hang tag system. Enforce using license plates.
Create Available Parking	Update pricing in public lots	Hourly rates start at \$0.50/hour; no daily max; no time limit. 9am - 6pm, M-Sat.	Engineering, Public Works	Update signage and web-based information.	Evaluate and monitor utilization through PMG and Town staff.
Improve Admin	Improve and market parking information	Parking information (updated postcard and web information) should be developed, branded, distributed, and advertised.	Chamber of Commerce, Visitors Center	Work with local businesses to create updated materials.	Distribute materials.
Create Available Parking	Integrate real time availability information in off-street locations	The Depot Square lot (and other public lots, if able) should have real time information signage on Mass Ave to show the # of available parking spaces.	Engineering, Public Works	Identify suitable vendors	Contact vendors to determine costs and parameters of use.
Create Available Parking	Evaluate Town Hall	Conduct Town employee parking needs assessment and develop better parking signage plan for Town Hall Lot	Police Department	Evaluate and monitor utilization.	Work on Town Hall lot reconfiguration and evaluate regulations.

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Category	Recommendation	Details	Entities Responsible (in addition to the Economic Development Dept and PMG)	Immediate Action	Subsequent Actions
Create Available Parking	Introduce first-ticket forgiveness program	Allow for each license plate's first ticket of the calendar year to be waived.	Police Department	Work with technology vendors to ensure compatibility.	Implement and advertise policy.
PHASE 3					
Improve Admin	Update zoning code language	The shared parking code should be updated to include language pertinent to eliminate or reduce minimums; shared parking code; bicycle parking requirements, etc.	Planning, Zoning	Draft updated code language to promote Town goals.	Town process for submit for approval.
Improve Admin	Coordinate the Town's Parking Operation and Management functions.	Consolidate parking functions under Parking Champion as needed; supplement with other Town departments.	Police Department, Engineering, Public Works, Planning, Lexpress	Hold quarterly parking management meetings for inter-departmental coordination.	Determine which functions can be managed under the Parking Champion and shift accordingly.
Improve Admin	Design and reconfigure lots	The Town Hall and Edison Lot should be restriped and reconfigured to maximize supply, improve vehicle and pedestrian circulation, and improve accessibility conditions. Include other lots as available, including public-private arrangements.	Engineering, Public Works	Evaluate redesign options and cost/benefit	Identify a funding source and schedule redesigns. Update signage.
Invest in the Center	Create a Parking Fund	Develop a fund that reinvest Lexington parking revenues back into the Center for transportation and Center related improvements. System users should be made aware that their money is being reinvested into the Center.	Chamber of Commerce, Visitors Center	Determine regulatory language/needed changes to draft language for the Fund. Determine committee and/or board to oversee the fund.	Market and advertise Fund

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Category	Recommendation	Details	Entities Responsible (in addition to the Economic Development Dept and PMG)	Immediate Action	Subsequent Actions
Invest in the Center	Introduce transportation demand management strategies	Reduce parking demand through various transportation demand management measures. Most suitable TDM measures include transit passes, parking cash out, bicycle subsidy, guaranteed ride home, car share (Town and public).	Chamber of Commerce, various Town departments	Identify one or two quick TDM measurable wins; start with Town employees.	Advertise benefits and work with large employers to adopt TDM program.
Invest in the Center	Identify and create pedestrian access improvements	Providing better direct and connected access points to and from parking lots to customer's final destinations. This includes formalizing pathways to and from existing parking locations and pathways to the Center	Engineering, Public Works	Review existing pedestrian patterns throughout the Center and identify locations for pedestrian access improvements	Formalize and prioritize list of pedestrian improvements needed. Identify preliminary goals for each in line with Lexington Center and to complement on-going streetscape efforts. Identify likely funding source for each - parking fund, abutting potential development, capital funds, etc.
Create Available Parking	Open Meriam Street access to Depot Lot	Remove barricades at Meriam Street	Police Department	Coordinate with surrounding residents.	Open gate and adapt Attendant functions.